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FARM-POULTRY

MONTHLY

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The Representative Paper of the world's most advanced poultry area — the North Atlantic States.
JOHN H. ROBINSON, EDITOR AND MANAGER

Vol. XXVI. No. 14

OCTOBER, 1915

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THE DISTRIBUTION OF EGG PRODUCTION *

PART I

HOW DOES THE TIME OF HATCHING INFLUENCE THE DISTRIBUTION OF EGG PRODUCTION?

IT BECOMES necessary, before drawing final conclusions, regarding the laying capacity of fowls, to ascertain whether the production of any particular individual is due to inheritance, or whether it has been modified by the environment. It now appears to be well established that either one or both of these two factors — heredity or environment — may be controlling influences.

Under normal conditions of development and management the domestic fowl should commence to lay when about six to eight months old. However, the time of first production varies with the breeds, varieties, strains and individuals. It is also influenced by methods of feeding, brooding, housing and care. The domestic fowl is, to a very remarkable extent, responsive to her environment. Among the important environmental conditions that influence egg production is that of climate. This is so important a factor that it must be taken into serious consideration in connection with the age at which pullets commence to lay.

Among the more important climatic conditions affecting egg production that surround a flock of fowls during the various seasons of the year, are excessive heat or cold, protracted drought or rainfall, the number of hours of sunshine or cloudy conditions, which affect the nature of the food supply, the activity of the birds, and their personal comfort and contentment. These, to a large degree, influence the productivity of the birds. So well established has this fact become that the most experienced practical poultrymen now generally understand the great importance of having chickens hatched at a certain time of the year in order to have the pullets reach the normal laying age at a definite time of the year which has been found, by practical experience, to be most conducive to the largest egg yield. It has been observed that with any given variety of fowls in any particular part of the country, if the chickens are hatched too early or too late, that they mature and commence to lay when the climatic conditions are likely to be either too hot or too cold, too wet or too dry, or to involve some other environmental influence that does not satisfy the most desirable conditions for securing a maximum egg yield at a time when eggs are most desired; namely, in this State during the fall and early winter months.

If the time of hatching does affect the way in which fowls distribute their production it becomes of vital importance, in studying the individual records of fowls with regard to inheritance of fecundity characters, to consider the time of hatching of each bird before we pass final judgment on her productive qualities. It is well, also, to inquire, when comparing the productivity of individuals or flocks, not only as to the time of hatching, but also as to the method of rearing, handling and care. This is particularly important where the method of selection is based upon the number of eggs produced by

an individual when she has reached a certain age, or at a certain date; for example, when ten months old or by March 1st or the first year, etc.

As a mere suggestion of the importance of knowing the time of hatching as affecting the production of individuals or flocks, some of the results of a study of the distribution of egg production of sixty-three fowls for three years is here shown. The fowls are all Single Comb White Leghorns. They were hatched and reared under essentially similar conditions and include all of the individuals of the flock that lived to complete three years or more. Of the sixty-three fowls, twenty-two were hatched May 2nd, twenty-one May 20th, and twenty-one May 31st. The first two groups were hatched at a time which, in Central New York, normally would be considered desirable for fall and early winter laying.



The third group apparently was hatched a little too late to fully mature and commence to lay before extremely cold weather occurred and normally would be expected, except under the most favorable conditions of rearing and desirable fall weather, to give less satisfactory fall and early winter egg yield than the earlier hatches.

It should be understood that the purpose in presenting these data is not to submit proof that the time of hatching is the sole cause of the wide difference in the production of the three groups hatched at different times of the year, but rather to point out the importance of considering the possible influence that the time of hatching may have on the distribution of egg production and the number of eggs laid in any given year or period of years.

The egg production of the May 31st hatch when compared with the average for the three groups shows that

the difference in production is, for the first year, 134.19 as against 118.60 or a difference of 15.59 eggs per hen; for the second year 122.62 as against 112.75, a difference of 9.87 eggs per hen, and when compared to the May 20th hatch, the difference is, for the first year, 142.00 as against 118.60 or 23.4 eggs per hen; for the second year, 133.95 as against 112.75 or an average of 21.20 eggs per hen, and for the third year 124.57 as against 104.70 or a difference of 19.87 eggs per hen, in every instance showing a decidedly smaller average egg yield for the 20 hens in the group hatched May 31st.

A study of the data reveals the fact that a few high record individuals are found in each of the three groups. For example the eleven fowls that laid an average of 150 eggs or more per year for three years laid as follows:

GROUP I

Hen No.	Av. per hen for 3 yrs.
7460	= 158.67
7486	= 165.33
7534	= 157.33
7578	= 164.33
7518	= 164.33

GROUP II

Hen No.	Av. per hen for 3 yrs.
5702	= 155.67
5697	= 183.67
5626	= 176.33
5727	= 151.00
5653	= 160.33

GROUP III

Hen No.	Av. per hen for 3 yrs.
7880	= 151.67
7851	= 151.33

A larger number, and these also higher producing fowls, it will be seen are found in the two earlier hatches. It would appear that the time of hatching of group 3 was a handicap to production not only the first fall and winter but also for the first year and for each year thereafter. Whatever may have been the cause of this difference in production, whether time of hatching or heredity, the result is certain that in this one instance the May 31st hatch, gave a much lower yield. This might be due to a difference in the natural productivity of the fowls in the third group as compared to each of the other groups, or it is possible, in fact, quite probable, that the difference in yield may be attributed to the seasonal conditions affecting the growth of the chickens or their productivity.

A majority of the pullets in each group began to lay essentially in the order of the dates when they were hatched, and some of the late-to-lay pullets in the early hatches did not commence to lay until after the earlier-to-lay pullets of the later hatches began to lay. It indicates the desirability of hatching chickens at various times during the best hatching season of any region with the expectation of securing a better distribution of production throughout the fall and winter than one would be likely to secure if all the chickens were to be hatched at the same time or within a short period of time. A careful examination of the daily and monthly records of various fowls in each group will indicate that after a fowl has laid heavily for a considerable length of time, there is a tendency to decrease in production, and to rest or to become broody. It is desirable, therefore, to have the time of hatching so arranged that when one flock is declining in production, other flocks, hatched a little later, are commencing to lay. By so doing, it is apparent that under normal conditions one may expect

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to secure and maintain a fairly uniform daily production, by arranging to have his hatching properly timed to fit the season in the particular region in which he lives. It is reasonable to suppose that the same difference in egg yield might not occur every year between flocks hatched May 2 and May 20 and May 31st, as is shown in the data here studied. The environmental conditions are not likely to be the same each year. Hence, hatching at the same date each year would not of necessity be expected to give the same comparative results as here shown. If the records of flocks hatched at widely different times, ranging from March 1st to July 1st were to be compared, unquestionably even wider contrast in production than here shown would be found. The pullets that were hatched too early would be expected to commence to lay in July or August and would be likely to molt in October and November, whereas those that were hatched too late would not be fully feathered and matured before the cold weather of November and December set in and as a result would be likely to be unproductive until toward spring.

The observation of flocks not included in the data here shown justifies the belief that the time limits for hatching Single Comb White Leghorns, to secure the most satisfactory results in fall and winter laying in the region of Central New York, one year with another, is about the first week in April to the last week in May.

Some interesting lessons in distribution of egg production may be drawn from the variations in the curves of production. The months of most favorable production each year it will be seen are the middle of March to the middle of July, and the lowest production is uniformly during those seasons of most unfavorable climatic conditions; namely, the middle of September to the middle of January. Each succeeding year the hens decrease the percentage production during the unfavorable season and lengthen the period of low production, while maintaining as high or higher percentage egg yield for a shorter and shorter time during the favorable season. In other words, the older the fowls become, the slower they are to commence to lay in the fall and the earlier they are to cease to lay toward the close of the year the following fall, and also, the older the fowls are, the shorter becomes the period when high production is secured until, eventually, it is found that very old fowls lay less and less percentage production each year and that these eggs are laid only during the natural mating season, which is also the most favorable season of the year. This period, in New York State, is April and May, but differs very materially in various regions of the country.

PART II

IN WHAT YEAR DO HENS NORMALLY LAY THEIR HIGHEST, MEDIUM OR LOWEST PRODUCTION?

It is apparent from studies of egg production, that hens differ widely in the manner of distributing their egg yield over a period of years. This apparently is both an individual and a breed or variety characteristic. A study of Table II will show how the annual egg yield of 169 S. C. White Leghorn fowls varies under central New York conditions and Cornell University methods. For the sake of comparison the fowls are classified into several groups, based on the year when they made their highest, medium or lowest production each year for three years. Nine combinations, not including those in which the yield is the same for any two years, are possible and are used in Table II as follows:

	1ST YEAR	2ND YEAR	3RD YEAR
1st,	highest	medium	lowest
2nd,	lowest	medium	highest
3rd,	highest	lowest	medium
4th,	lowest	highest	medium
5th,	medium	highest	lowest
6th,	medium	lowest	highest;

and so on.

To make the group comparisons clearer a different kind of type is used in Table II, to indicate the years when each group made its highest, medium or lowest production. It will be seen that by far the larger number of the 169 fowls under consideration, namely, 17.31% fall into the class that lay in the order of most eggs the first year (158); less the second year (127); and least the third (102), a total for three years of (389.19); and that only 4.73% lay in the order of least the first (91); more the second (107); and most the third year (115), a total for three years of 314.13 eggs. The third, fourth and fifth groups are equal in point of numbers, namely, 12.13% each, the third group laying the most the first year (149) eggs; least the second year (111); and more the third year (120), a total for the three years of (382.19) while the fourth group laid least the first year (95) eggs, most the second (134) and medium production

DISTRIBUTION OF CALENDAR YEAR EGG PRODUCTION OF 63 S. C. WHITE LEGHORNS FOR THREE YEARS AT CORNELL, ARRANGED IN THREE GROUPS ACCORDING TO DATE OF HATCHING AND IN EACH GROUP ACCORDING TO THE PRODUCTION OF FIRST EGG.

TABLE I

GROUP I—TWENTY-SEVEN FOWLS, TWENTY-TWO OF WHICH LIVED THREE YEARS. HATCHED MAY 2.

Band No.	Egg Production			Total	Av. for
	1st yr.	2nd yr.	3rd yr.	3 yrs.	3 yrs.
7460	203	150	123	476	158.67
7486	212	153	131	496	165.33
7523	111	123	126	360	120.00
7469	118	104	121	343	114.33
7484	117	111	111	339	113.00
7317	114	120	86	320	106.67
7472	157	112	92	361	120.33
7542	97	112	92	301	100.33
7360	136	(74)			
7420	155	(4)			
7370	123	64			
7543	179	82	83	344	114.67
7534	190	155	127	472	157.33
7477	173	147	119	439	146.33
7503	157	127	137	421	140.33
7540	150	137	120	407	135.67
7513	129	134	147	410	136.67
7518	221	163	109	493	164.33
7473	116	106	82	304	101.33
7538	105	114	87	306	102.00
7455	138	107	105	350	116.67
7549	151	152	(126)		
7536	138	124	108	370	123.33
7510	134	175	(87)		
7504	83	86	57	226	75.33
7403	87	115	114	316	105.33
7511	45	75	69	189	63.00
Total	3799	3048	2352	8199	
* Av.	140.70	121.92	106.91	368.59	122.86

GROUP II—TWENTY-EIGHT FOWLS, TWENTY-ONE OF WHICH LIVED THREE YEARS. HATCHED MAY 20.

Band No.	Egg Production			Total	Av. for
	1st yr.	2nd yr.	3rd yr.	3 yrs.	3 yrs.
5702	187	147	133	467	155.67
5697	243	162	146	551	183.67
5642	161	132	115	408	136.00
5695	120	112	107	339	113.00
5726	(82)				
5647	186	139	(117)		
5713	103	(99)			
5626	197	173	159	529	176.33
5719	147	113	112	372	124.00
5675	148	136	155	439	146.33
5727	169	139	145	453	151.00
5653	155	175	151	481	160.33
5320	138	133	148	419	139.67
5705	111	123	123	357	119.00
5624	124	137	102	363	121.00
5634	115	170	145	430	143.33
5657	(90)				
5709	133	(52)			
5633	159	114	133	406	135.33
5720	97	(16)			
5681	86	54	54	194	64.67
5707	155	127	96	378	126.00
5674	118	165	132	415	138.33
5685	68	80	82	230	76.67
5680	87	140	108	335	111.67
5650	113	139	137	389	129.67
5621	108	(113)			
5708	151	142	133	426	142.00
Total	3609	2952	2616	9177	
* Av.	138.81	134.18	124.57	400.52	133.51

GROUP III—TWENTY-TWO FOWLS, TWENTY OF WHICH LIVED THREE YEARS. HATCHED MAY 31.

Band No.	Egg Production			Total	Av. for
	1st yr.	2nd yr.	3rd yr.	3 yrs.	3 yrs.
7859	119	138	115	402	134.00
7582	127	112	95	334	111.33
7872	117	110	122	349	116.33
7860	106	72	58	236	78.67
7683	86	98	96	280	93.33
7880	151	145	159	455	151.67
7697	169	121	103	393	131.00
7566	(157)				
7897	137	124	139	400	133.33
7700	152	135	111	398	132.67
7873	128	110	87	325	108.33
7874	137	151	(10)		
7851	117	151	153	421	140.33
7561	161	137	117	415	138.33
7668	106	101	114	321	107.00
7575	153	128	121	402	134.00
7579	80	60	71	211	70.33
7675	110	119	131	360	120.00
7658	45	53	65	163	54.33
7865	70	84	71	225	75.00
7852	76	75	80	231	77.00
7680	69	119	53	241	80.33
Total for Group III	2509	2406	2094	6709	
* Av.	114.48	114.57	104.70	333.65	112.02
* Av. of 3 grps.	134.01	123.62	112.10	368.90	

* Average includes all those fowls that completed full year records. Incomplete years are shown in ().

the third year (119), or a total of 349.29 eggs in three years.

The fifth group laid medium production the first year (119); highest the second year (133), and lowest the third year (99), a total of 352.33 eggs for three years, whereas in group 6 they laid medium production the first year (130) eggs; lowest the second year (121), and highest production the third year (138), a total of 389.82 eggs for three years, which was the highest average production of any of the first six groups mentioned. The other five groups can scarcely be compared with the six preceding groups because of the fact that the same number of eggs were laid each year for two years. It is interesting however to note, that the highest total yield for three years was in group 10, where the record of only one fowl is shown which laid a high average sustained yield for three years (147) the first, (147) the second and (132) the third or a total of 426 eggs. This hen, however, was not the highest producing individual among the 160 under observation. The two most prolific hens are in groups 3 and 5. The uniformly high yield of hen Number 3418 "Cornell Supreme" of (222) first year, (223) the second year, (220) the third year, an average of (221) each year, or a total of 665 eggs for three years is remarkable. The very high producing birds are found more largely in groups 1, 3 and 5. The egg production of the ten more prolific hens for three years is as follows:

Grp.	Band No.	1st yr. Prod.	2nd yr. Prod.	3rd yr. Prod.	Ave. Prod. for 3 yrs.
Grp. I	3113	200	167	162	176.33
	5626	197	173	159	176.33
	5697	243	162	116	183.67
	8362	206	175	117	166.00
Grp. III	8483	201	175	140	172.00
	3211	248	200	201	216.33
Grp. IV	3352	230	146	163	179.67
	8520	163	202	172	179.00
Grp. V	3418	222	223	220	221.67
Grp. VI	8686	192	178	197	189.00

The groups that made their best production in their first year, as shown in Table II, namely, groups 1 and 3, representing 59.77%, and those that made their best records in the second year, groups 4 and 5, namely, 24.86%, or a total for the four groups laying their most the first or the second year 84.63%, clearly includes most of the exceptionally high producing birds of the first six groups where three year records are compared.

It will be seen that Group 6, containing eleven fowls, or 6.51%, by well sustained, moderately high yield for three years, attained a rank of second place among the six groups, based on three years' production. In making selections for the breeding flock, one must give reasonably good hens the "benefit of the doubt." Many of these, by maintaining a high or a medium to high average production for a period of years, frequently make exceptionally good records as long-distance-laying hens. From the records of such hens as the fifteen selected from Table I, whose records follow, Table III we are forced to realize that we should not so far lose ourselves in our quest for the so called "200 egg hen" that we fail to appreciate and give full credit to the staying qualities of the "150 egg hen." Perhaps herein lies our greatest hope for permanent development of the most profitable strain of fowls for egg production.

THE ANNUAL EGG PRODUCTION OF FIFTEEN FOWLS WHOSE RECORDS FOR THREE YEARS ARE OVER 400 EGGS PER HEN AND NINE OF WHICH DID NOT EXCEED 150 EGGS PER HEN THE FIRST YEAR.

(From record of 63 hens Table I).

TABLE III

Leg Band No. of Fowl	First Yr. Egg Production	2nd Year Egg Production	3rd Year Egg Production	Egg Production for Three Years
7897	137	124	139	400
7859	119	138	115	402
7573	153	128	121	402
7510	150	137	120	407
7513	129	131	117	400
5320	138	133	118	409
7675	140	149	131	420
7503	157	127	137	421
5708	151	112	133	426
7700	152	135	141	428
5675	148	136	155	439
5674	118	165	132	415
7851	147	151	153	451
7880	151	145	159	455
5653	155	175	151	481

It is apparent, from these records, that if one selects the birds that made their highest or very high records either in the first or second year, he will be likely to secure most of the high producing fowls in the flock.

TABLE II

Group Symbol	No. of Hens	% of Total	Average Product 1st yr.	Average Product 2d yr.	Average Product 3rd yr.	Total Ave. Product 3 years	3 yr. Rating of Groups
I	80	47.34	158.68	127.60	102.91	389.19	(3)
II	8	4.73	91.0	107.88	115.25	314.13	(8)
III	21	12.13	149.86	111.95	120.38	382.19	(4)
IV	21	12.13	95.48	134.29	119.52	349.29	(7)
V	21	12.13	119.05	133.90	99.38	352.33	(6)
VI	11	6.51	130.45	121.27	138.09	389.82	(2)
VII	1	.59	86.00	54.00	54.00	194.00	(10)
VIII	2	1.18	100.00	129.50	129.50	359.00	(5)
IX	2	1.18	58.50	58.50	63.50	180.50	(11)
X	1	.59	147.00	147.00	132.00	426.00	(1)
XI	1	.59	80.00	72.00	80.00	232.00	(9)
Total for all groups, 169	100.00	136.92	124.48	109.18	370.57		

Distribution of Egg Production by One Year Periods as an Indication of Prolificacy Three Calendar Year Record of 169 S. C. White Leghorn Hens at Cornell University.

We hear much about breeding from the "highest," "medium," or "lowest," producing birds. There is practically no agreement among poultrymen as to just what these terms,—“highest,” “medium,” “lowest,” signify. To one person “highest” means two hundred, or one hundred and seventy-five, or one hundred and fifty eggs per year; to another it means three hundred or three hundred and fifty, or four hundred eggs in two years, or perhaps four hundred and fifty, five hundred and fifty, or six hundred and fifty eggs in three years, or thirty eggs or more by March 1st, or thirty-five or more at ten months of age, etc. There are nearly as many opinions on this question as there are persons expressing them. If practical poultrymen and investigators alike are not agreed as to the number of eggs that hens should be expected to lay within any particular time, or the length of time that should be taken as a reliable measure of a hen's productive capacity, what, then, shall be the standard and what shall be the terms to describe differences in laying capacity? Shall our measure be applied to the number of eggs laid within a short or long span of time, and where shall the line be drawn that is to separate the high from the medium and the medium from the low producing individuals? If it were found that fowls at all ages are, consistently high, medium or low producers the problem would be comparatively simple. It is found, however, as these data clearly show, that not only do hens vary between wide limits in the number of eggs that they lay when compared with one another, but the production of each individual varies radically during various periods of her life (Tables I, II, III, IV, V and VI). This makes it doubly difficult to decide upon any particular number of eggs that a high, medium or low producer should lay in order to fall into any specified group, and equally difficult to decide upon a definite time or times in the life of a fowl when one would be certain or be likely to get the most reliable estimate of her laying power.

The records of egg production for individuals or groups for one, two or three or more years, or two or three or more years combined, show conclusively that fowls differ in the number of eggs that they lay, whether we consider their records for a short or a long period of time, and that these differences vary in the case of the records of 169 fowls (Table II) from no eggs to 248 for the first year, from no eggs to 223 eggs the second year, from 3 eggs to 220 the third year, and from 3 eggs to 665 in three years.

It is also shown that egg production varies by differences of only one or more eggs per hen when we compare them by any of the known methods of rating. It seems clear, therefore, that fowls do not fall into any well defined classes or groups, such as “high” “medium” or “low” producers, into which all or any considerable number of fowls might be placed. Hence, it remains for man to classify fowls according to their production into such groups as best serve his particular purpose, with the understanding that there can be no clean-cut line dividing the high from the medium and the medium from the low producers. It should also be understood that, in the absence of any natural grouping, if any arbitrary system of classification be adopted for any particular period of time, that the hens would have to be reclassified whenever their records for a different period of time is considered. Just because a hen lays more eggs than another for one year, does not necessarily indicate that she will be a better producer than the other the next year. This fact is clearly indicated in Table VI, where the relative merits of several fowls are compared with reference to one another for a period of years. The “plus” and “minus” marks indicate whether or not a hen is higher or lower in her production than the one with which she is being compared.

The way in which each fowl varies in her egg production, month by month and year by year, and the way in which fowls of the same variety, age, breeding and care differ in their laying powers from one another, makes the problem of deciding what particular birds should be honored or discredited in mating up our breeding pens or working out our breeding equations an exceedingly hazardous undertaking. The fact that man has placed upon the hens the responsibility of living up to the good or bad “character” that he has given them in his for-

mulas on the assumption that, as layers, they possess the high, medium or low, or absence of fecundity character is asking a good deal of innocent subjects. The responsibility is greater than most persons or hens will care to assume with our present knowledge of the laws governing inheritance of the fecundity character.

(To be Continued)

The A. P. A.'s Jurisdiction Over Members

UNDER the heading “Instructions to Judges” in the 1915 Standard, we find this new paragraph:

“Private Scoring: Private scoring of specimens is not advisable, and members of this Association are directed not to lend their support to the practice as a selling method.”

The writer was not aware when he stated in a recent article that if he were engaged in selling “Standard” stock, and wished to develop business as much as possible, he would cater to the trade that wants to buy according to the score, that the American Poultry Association had put itself in the position of undertaking to direct its members in this matter, or any matter of the kind. Also, in view of the extent to which words are used in the Standard that do not seem to be just the words intended, he is in doubt, until more fully informed, whether it was the intention of the association to claim such authority over its members as the word “direct” implies here. If it does, we will certainly deny its right so far as it applies to ourselves.

* EGG PRODUCTION OF SIX HIGHEST, SIX MEDIUM AND SIX LOWEST PRODUCING FOWLS FOR THREE YEARS.

TABLE IV

Rating of 38 hens based upon the first 10 months' production from date of hatching and shown number of eggs laid per hen per year for a period of years.

Six Highest Producers	Age laid 1st egg.	First 10 months.	To March 1st.	1st year.	2nd year.	1st and 2d years.	3rd year.	1st, 2d and 3rd years.
3352	180	92	69	230	146	376	163	539
3211	202	71	56	218	200	418	201	619
3418	206	64	50	222	219	441	220	661
3687	199	58	46	202	146	348	121	469
3113	220	57	42	200	167	367	162	529
3511	213	51	40	179	96	275	97	372
Six medium Producers								
3097	210	33	35	147	96	243	73	316
3079	207	32	32	169	168	337	112	449
3336	188	31	15	143	117	260	104	364
3075	209	29	31	144	117	261	103	361
3189	240	28	15	126	147	273	130	403
3477	254	26	15	148	161	309	114	453
Six lowest Producers								
3276	258	12	6	106	126	232	115	377
3072	208	11	14	126	137	263	140	403
3332	296	6	0	53	60	113	41	154
2976	292	3	3	113	105	218	111	319
6087	292	1	0	89	156	245	140	385
3695	313	0	0	66	151	220	129	349

* From continued article on "Distribution of Egg Production," CORNELL COUNTRYMAN, February, March and April, 1913.

TABLE V

“Rating” of 38 hens based upon Egg Production of Six Highest, Six Medium and Six Lowest Producing Hens for a period of years.

A period of years									
Six Highest Producers									
3352	1	1	1	2	10	3	3	3	
3211	7	2	2	1	2	1	2	2	
3418	12	3	3	3	1	2	1	1	
3687	6	4	4	5	11	5	13	5	
3113	23	5	5	6	4	4	4	4	
3511	18	6	8	8	30	13	24	17	
Six medium Producers									
3097	17	17	11	15	31	23	34	28	
3079	14	18	14	10	3	7	17	8	
3336	5	19	23	20	23	19	21	19	
3075	16	20	15	18	24	18	22	20	
3189	28	21	24	23	9	14	9	12	
3477	30	22	25	13	5	9	6	6	
Six lowest Producers									
3276	31	33	32	32	16	27	5	16	
3072	15	34	28	21	13	17	7	13	
3332	37	35	36	38	38	38	37	38	
2976	36	36	33	28	26	30	18	27	
6087	35	37	37	35	6	22	8	14	
3695	38	38	38	36	7	28	10	21	

THE DIFFERENCES IN EGG PRODUCTION OF CERTAIN FOWLS FOR THREE YEARS.

TABLE VI

Hen. No.	First 10 months.	1st Year.	2nd Year.	1st and 2nd Years.	3rd Year.	3 Years
3211	71	218	200	418	201	619
3352	92	230	146	376	163	539
Dif.	-21	-18	-54	-72	-38	-110
3516	53	173	136	309	114	423
3079	32	169	168	337	112	449
Dif.	+21	+4	-32	-28	+2	-26
3189	28	126	117	273	130	403
3249	25	123	90	213	92	305
Dif.	-3	+3	+57	+60	38	+98
3276	12	106	126	232	115	377
3348	11	91	93	184	51	235
Dif.	-2	+15	+33	+48	94	+142
2976	3	113	105	218	111	329
3498	45	113	82	195	91	286
Dif.	-42	0	+23	+23	+20	+43

ARTIFICIAL REARING OF POULTRY

BY THE LATE JAMES RANKIN

(Continued from September Issue)

I MADE arrangements for an early start the coming winter, as what broilers I had sold brought sixty-five cents per pound at the club house in Boston, and I did not have enough to supply the demand. I started machines and hens about the first of January, taking every precaution to ensure success. My chagrin may be imagined when, as I had confidently expected at least 90% to hatch, I, in reality, got but 40%. The rest of the eggs contained chicks dead in all stages.

It is true that it was a decided improvement on the last winter. I had three times as many chicks and they were all doing well. They had also been hatched on time, which was a great point. I tried a second hatch with the same result, biddy coming out as usual.

I had no longer doubts about the success of artificial incubation. Those eleven chicks the previous year had proved it beyond a doubt. Notwithstanding the inventor's assertion, I believed the trouble was in the machine, and not in me; because I had heard, in a roundabout way that he was not doing any better than I was,—in fact, not as well, and I found that a great many others were victimized with it like myself.

In an unfortunate moment, just after I was through with that experimental hatch the season before, the inventor had written me for a testimonial, and, being elated at the time, I wrote him that I had just got a 100% hatch. Of course he made free use of it, and it materially assisted him in victimizing others.

Being thoroughly convinced that the machine was at fault, and not myself, I overhauled it in every part. I found that the egg chamber was heated by perpendicular tanks on all sides except that occupied by the door in front; also by a tank over the top.

The machine was ventilated through the tank over the top in the center of the egg chamber, the cold air being admitted through the doors in front. By this arrangement, at the back of the egg chamber where it was all tank, and constant heat radiating therefrom, there was no ventilation, while in front, where there was no heat, was located all the ventilation.

It was easy to see now where the trouble was. But why had I not seen this before? I had blindly thrown away hundreds of dollars' worth of time and eggs during the first two years. I wrote the inventor, plainly stating the defects in the construction of his machine, and asked him if he would not remodel it to suit me. He answered me by asking if I pretended to know more about the machine than the manufacturer who invented it.

I purchased a dozen glasses at once, resolved to know the extent of the trouble. I placed these glasses in every part of the egg chamber. I found that while the temperature was 103° in the center, it was 100° at the back and sides, and 100° at the front; and while the glasses represented 103° on the upper trays, the lower ones represented 98°.

This at once accounted for my previous failures. I then closed up the draft in front and, drawing the water out, bored holes through the tank in the back and sides, admitting ventilation where it was needed most, filling up the tank to just below the egg trays. This evened up the heat in the egg chamber to a great degree, and decidedly increased my percentage.

But this was not satisfactory; for though I was tolerably sure of from 60% to 70% of the eggs hatching, yet I could use but one tray, thus cutting the machine down to one-third its original capacity, which made a very expensive machine of it. I ran this incubator in connection with hens for a number of years, and they made about an even thing of it. Sometimes when I overslept myself, biddy would come out a little ahead; and, again, when she would prove refractory, smash eggs, and give up the business just before the hatch was due, the odds would be in favor of the machine.

I was dissatisfied with this state of things. Sad experience had taught me what the requirements of a good incubator were. How to get them all in one machine was the difficulty. In the meantime, a number of new machines had been invented in different parts of the country, all claiming to do first class work, and to completely supersede the old machines, which were denounced as worthless. The heat in these machines was regulated by batteries, thermostatic bars, etc., even to the fractional part of a degree. The machines were accompanied by testimonials from different parties, apparently genuine, claiming eighty, ninety, and even one hundred per cent hatches.

I now thought my time had come. Though I had done fairly well with my machine for a number of years, yet I did not get first class hatches, and there was altogether too much night work connected with it. I was ready to buy another machine if it was as represented; and as some of them had drifted into the adjoining counties, I thought I would go and interview the owners of these machines and, by personal investigation, satisfy myself as to their merits.

One man said that he had put in a few eggs the first time, and hatched a pretty good percentage of them, and then filled up his machine, and somehow the battery got out of fix and he did not hatch anything, but at the present time it was running nicely.

On visiting another of different pattern (also run by battery) the operator said that he had put in a small number of eggs and hatched nearly one hundred per cent. (By the way, his testimonial had particularly at-



tracted my attention). But when he had put in a large number of eggs his percentage was much smaller. In fact, the greater the number of eggs the smaller was his percentage of hatch.

I thought of my own experience several years before. With the owner's permission I introduced glasses in different parts of the machine. It was as I expected; no uniformity of heat in the egg chamber. The worst feature of my investigation was that there were very few chicks to be seen, and those few had a strong resemblance to some of mine I had got out in similar manner six or eight years before.

There was one exception, however. One man had about one thousand chicks, but as he had also some seventy-five or one hundred hens sitting at the same time, I was not sure of their origin. I did not find things as favorable as I expected, for, on comparing notes, the balance was decidedly in favor of my own machine.

Let it be here understood that I do not wish to detract anything from machines run by electricity. Some of these machines have become greatly improved, as well as their batteries, and are really doing good work. Others still have been more recently invented, and now stand side by side with the older machines.

I had now either got to run the old machine or make something better myself. I had had experience enough in this business to know what the requirements of a good incubator were, but how to get them all into one machine and have them work together harmoniously was something that had puzzled brighter heads than mine.

Several machines were constructed in succession, with gradual improvements in each, yet all with some defects. In 1878 a machine was built, regulated on an entirely different plan, making the very principle which generated the superfluous heat provide for its own escape. It worked to a charm; no more night work now. The first hatch was the best I had ever experienced. I obtained some four hundred chicks, or more than ninety per cent of the fertile eggs; and I will here say that of the next two thousand chicks got out of that machine, not a hatch registered less than ninety per cent, and from that upwards, while from my hens sitting on the same eggs, and with the best of care, I obtained less than sixty per cent. The question of success in artificial incubation was clearly settled in my mind. The use of hens for purposes of incubation was entirely discontinued.

I will not weary you with an account of the various experimental machines, run solely with a view to elucidate the scientific principles of artificial incubation. Carefully noting the necessary amount of heat, ventilation and moisture required in the different stages of development,—all this has been to me very interesting. It has, all told, required a great expenditure of labor and study, and called for much patient investigation; but the results attained have been highly gratifying.

It will be observed that, during the first part of my experience with incubators, my greatest trouble was to get chicks enough from them to supply my broody hens. During the latter part, the trouble was to get hens enough to care for the chicks.

When the hens were laying well, and there was a reasonable expectation of their soon becoming broody, machines were filled with eggs, anticipating that event. But I was so often disappointed that I have sometimes been obliged to put forty to fifty chicks to each hen. Of course a sad mortality was sure to follow. The situation was becoming desperate, and nearly as bad as at first. There was now no trouble in hatching. I could get out strong, healthy chicks in any desired quantity, but as I wished to get them out in winter, the question was, what to do with them.

In the autumn of 1879 I began the construction of artificial brooders, anticipating the winter's hatch. These brooders were intended to accommodate about two hundred chicks. The heat was generated in copper boilers, flowed through an iron pipe, and returned to the boiler through a galvanized iron tank. This tank was eleven inches wide and five and one-half feet long, and supplied the heat to the chicks. I proposed to try one carefully, and satisfy myself as to its utility, before using them on a larger scale.

In pursuance of this plan, I chose one of my chicken houses, some seventy-five feet long, for the purpose. In one end of this building I put eight hens, giving them, in addition to what chicks they hatched themselves, one hundred chicks from an incubator started for the purpose. In the other end of this building I put a brooder, with one hundred and fifty chicks taken from the same incubator. They all received the same care, except that the hens' department got a great deal the most, because they needed it. Those chicks were hatched January 21. On May 25 following, when four months and four days old, the chicks were sent to market.

Of the one hundred and fifty brooder chicks, one hundred and thirty-five were matured, a number had died in the brooder, one or two were drowned, and, as brooder chicks are very tame, and my understanding unusually well-developed as a natural consequence quite a number were trodden upon. The largest chicks in the brooder weighed six and one-half pounds. The aggregate weight was six hundred and thirty-nine pounds, and the price received forty-five cents per pound live weight, amounting to \$287.55.

Of these chicks which were consigned to the hens, ninety-eight were left. Their aggregate weight was three hundred and ninety-two pounds, which brought \$176.40. Very few of those hens' chicks weighed over four pounds. It is needless to state that the brooders were brought into requisition at once.

After April 1 the brooders were located out of doors, in different parts of the yard. Hens were supplied with chicks and placed at a proper distance. All were properly cared for, as I was bound to see the experiment carried out through the entire season. In every case the advantage was with the brooders. Not only was the mortality less, but the chicks were larger and their condition better. And strange to say, where the hens were located near the brooders, before the chicks were ten days old they would leave the hens and crowd into the brooder, and some hens had not a chick left. They had found where there was plenty of heat and no vermin.

That season's experience perfectly satisfied me in regard to the utility of brooders. I have made no use of hens since, as all I require of them is to furnish me with eggs.

I have grown annually, for the last ten years, from three thousand to five thousand ducks and chicks for the early market. This has been done in connection with, and supplementary to, other farm work. The chicks are taken from the machine when about twenty-four hours old, and should be fed for the first time about thirty-six hours after leaving the shell. The very best feed extant for that purpose is the infertile eggs boiled hard, chopped fine, and mixed with one part egg and three parts bread crumbs, for the first three days. Chicks will always thrive on this feed. After three days, the feed may consist of three parts Indian meal with one part shorts, scalded together.

This diet should be interspersed with green food, such as grass, chopped onions, boiled potatoes, refuse cabbage, etc. Cracked corn and wheat may be added as they grow older—say when ten days old.

Feed four or five times a day, when your chicks are first out, and never give them more than they can eat clean. Give a little meat occasionally, and, above all, give the young things plenty of exercise; everything depends upon that. Dig away the snow in front of your poultry buildings if in winter. The chicks will not need much urging; simply give them the opportunity to go out when the sun shines. Always recollect that the most active members of the body, either in man or animals, are the first to suffer from disuse, and that swollen feet and weak and crippled limbs in young chicks—though usually attributed to rheumatism—are simply caused by too highly concentrated food and too little exercise, thus causing a total want of action in the digestive organs, and the chicks literally starve in the midst of plenty.

Skim milk, either sweet or sour, is excellent for mixing the feed. It will give young chicks a vigor and a growth in cold weather when other things fail. Plenty of clean water should be kept by them.

Brooders and runs should be cleaned out thoroughly and often, and the whole premises kept well disinfected.

In constructing suitable buildings for growing winter chicks, convenience as well as economy should be taken into consideration. For as labor is nearly the most expensive essential in a poultry establishment, buildings should be gotten up with a view to economize that, even if the original cost should be a little more. I am more and more satisfied that a walk three or four feet wide is a necessary adjunct to both poultry and chicken buildings of over thirty feet in length.

A good building for chicks in winter should be about fourteen feet wide, facing the south, with a four-foot walk on the rear side. It should be divided off into pens five feet wide, a brooder and fifty chicks in each. This would give a space five by ten feet to fifty chickens. There should be a yard of corresponding width in front for out-door exercise. This building can be extended to any desired length, and need not be more than two feet high in front, with say five-foot posts in the rear. It can be put up with an unequal double roof, with a ten-foot slope in front and a four-foot slope in the rear. The glass should be run from the eaves about six feet up the slope in front, and need not occupy more than one-half the longitudinal space on the roof.

Ventilation should lead from out the floor up through the peak, and will come up by the partition which separates the chicks from the walk. The sashes should be so adjusted as to slide, and give additional ventilation during extreme warm weather, and so arranged that they can be operated upon from the walk.

Opinion is about equally divided as to the best and most economical method of heating a chicken house. Many prefer to heat with hot-house boilers, running hot water through the whole length of the building, and utilizing the heat from the flow and return pipes as brooders for the chicks. There is no doubt but that this system will work well, but it is too expensive for a man with but little or no capital, as it will cost nearly as much as the whole building. Nor is the first cost the whole expense attending it, for if you have but fifty chicks it necessitates heating the whole building; whereas, by the system of separate brooders in each pen, one cent's worth of oil will furnish heat for fifty chicks, so that your expense can be exactly proportioned to the number of chicks. Besides, a complement of brooders can be furnished at less than one-fourth the cost of boiler and pipes.

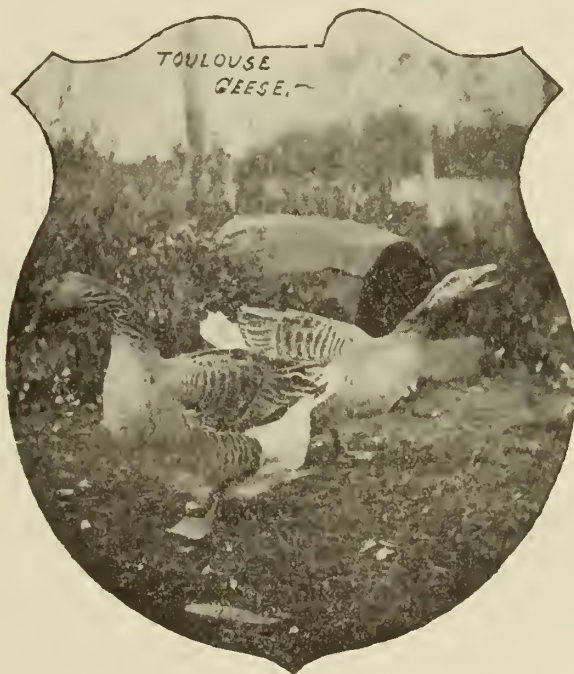
The best time to hatch chicks for broilers is in January and February. Hold them until the first of June, or until just before the price falls, getting all the weight on them you can. Good chicks, well cared for, should weigh at four months old ten pounds per pair. Chicks of that size will always sell much more readily than smaller ones, and at better prices, as the market is always full of the latter size.

I have often heard people say that chicks got out in April were early enough for them. I once heard a prominent poultry grower say that he would not give a cent to get out a chick before the first of April. Perhaps it would be as well to expose that error now as at any time. There is not a farmer present but what knows that the first hundred pounds put on a young animal, whether of beef or pork, costs a great deal more than the last hundred pounds when the animal is ready for the shambles. The same rule holds good with poultry, only much more so. I can easily put the last three pounds on a five-pound chick, when all risk from mor-



Emden Geese

tality is gone, for five cents per pound, but I want ten cents to put on the first two pounds. But this is not all. A prominent Boston dealer, about the middle of July, when asked how chicks sold, told me that there was a big demand for four-pound roasters, but that the market was glutted with chicks weighing three or four pounds per pair. Said he: "There is a box of chicks of the latter kind we are retailing for twenty-seven cents per pound. There is a box of four-pound chicks that I got from Natick this morning that I paid forty cents per pound for, and we are retailing the best of them for sixty cents." I cannot sell chicks weighing two and



three pounds for anything like a satisfactory price, but when I get them out early and weighing four to five pounds, I get just about what I want for them. The reason is obvious. There is a rapid decline in the market. From the middle of June to the first of September your two-pound chick, if you can only sell him, will bring you as many dollars and cents as your three-pound three weeks later. The extra pound will not compensate for the fall in the market, hence the frantic efforts to force small chicks on the market.

It will readily be seen by this that the profits on one chick got out in January and February are more than the profits on five chicks got out in June and July. Indeed, no one can afford to hatch chicks during the



summer months, as the extreme heat will reduce the size and vitality of chicks far more than the cold of the early spring months. Then, as they are always sure to be off condition, the price is always low, compared to the more robust chicks got out earlier in the season.

Chicks hatched before the first of March should all be sold, both pullets and crows, otherwise the pullets will lay in July and August, and would moult in the fall, the same as an old hen, and one can hardly afford to keep a two-dollar pullet idle through the winter, and then sell her for less than half that sum in the spring.

The proper time to hatch out Asiatics for winter layers is in March and April, while the Leghorns and smaller breeds will do as well in April and May, and even the first of June.

During the months of January and February my machines were run entirely on hens' eggs, and our buildings were filled with chicks, all intended for market. During March the machines are run to their utmost capacity on ducks' eggs. During April, the incubators are run largely on hens' eggs, to furnish store fowls for winter laying. Then in May and June they are run entirely on ducks.

Brooders are especially convenient in growing ducks, as the ducklings seldom need heat more than ten days.

The raising of ducks for market is a business which I supplement to my chicken business. I find it, if anything, more profitable than chicken raising, as the ducks can be hatched and grown artificially with far less care and trouble, and with much smaller percentage of loss, than when grown under hens.

I have got out, the present summer, some three thousand ducklings, and can truly say that from the first fifteen hundred I lost but one duck.

These ducks simply require water to drink, and are fed nearly the same as chickens, except that they need rather more animal food as they increase in size. They should be carefully guarded from the rain for the first fortnight. They should also be yarded while young, for, if allowed free range, they greedily devour all manner of insects, which they do not stop to kill, and too often pay the penalty with their lives. Boiled potatoes and vegetables should be fed freely at least once a day to young ducks; they should have four meals each day until five weeks old. Cracked corn and refuse wheat may be kept by them, but while fattening they should have all the soft food they can eat at least three times a day.

Ducks should be marketed at nine, or ten weeks old, as soon after that the pin feathers begin to grow, and they are off condition and soon become poor, while it is an immense job to pick them. If not marketed at the time above mentioned, they will not be in condition again till after they are four months old. Pekin ducks at nine weeks old, if well fed, will dress from eight to eleven pounds per pair. I obtained for the first lot sold this season, \$3 per pair. At present (June 15), the Boston dealers return \$2 per pair.

An idea may be formed of the profits connected with the business, when a careful estimate places the cost of growing a duck at less than twenty-two cents per head up to nine weeks old. Ducks will stand close confinement far better than chicks, are voracious eaters, and are not particular as to the quality; and to my mind a pair of nicely roasted young ducks is excelled by nothing in the poultry or game line, and is a dish fit for an epicure.

Store ducks should be kept in a warm place and fed liberally to induce early laying. The incubator should be filled with these eggs as early in spring as may be, as the sooner the young ducklings are hatched the higher the prices obtained. Yet, unlike chicks, they are very profitable when hatched out as late as the first of August. I hatch most of my ducks in May and June, when the hatch of chicks is concluded and the machines would otherwise be idle. As fast as the spring broilers go to market, the buildings are filled right up with ducklings. Now as ducks will be as heavy at eight weeks as chicks at eighteen weeks, it will be readily seen that the one business does not necessarily interfere with the other.

Up to the present time of writing (June 15), I have some two thousand ducklings out. Quite a number of these ducklings have already been marketed, dressing from ten to eleven pounds per pair at nine weeks old. As these ducks bring thirty cents per pound at wholesale prices in Boston, and cost but five cents per pound to grow them, it is easy to see that it is a paying business. I do not lose more than one per cent of the ducklings when they are properly cared for, my hatches running from ninety to ninety-eight per cent of fertile eggs.

(To be Continued).

Farm-Poultry

Established September, 1889

Published Monthly by Farm-Poultry Publishing Company at No. 39 Sudbury Street, Boston, Massachusetts.

Subscriptions in the United States and possessions and Mexico, 25 cents a year; five years, \$1.00. In Canada, 40 cents a year; three years, \$1.00. In other countries, 50 cents a year.

Advertising Rates—Display advertisements: 10 cents per agate line; \$1.40 per inch. No advertisement of less than one inch accepted.

Classified Advertisements—15 cents a line. No advertisement less than two lines. Discount on yearly paid in advance orders.

Topics of the Times

The Business Outlook

THE outlook for business in poultry lines is distinctly better than it was a year ago, yet so far as we can see, there are no indications of a return to the conditions prevailing in the four or five years preceding the sudden slump in the spring of 1912. Those days have gone not to return very soon. We may have booms—that is to be expected—but they will not follow the course of previous booms. "History never repeats."

To mention particulars, (omitting the general business situation, in regard to which the reader is, no doubt, kept well informed by his newspaper), this has been a pretty good year for growing poultry, and the young stock of the season is generally at least a month ahead of last year. It ought to be earlier, for last year most of it was far too late, but a general gain of a month in a year is all that can be expected.

Indications are that there will be a fair demand for stock of good breeding and exhibition quality, but at prices lower than have prevailed for some time. We think that this may perhaps work out to the advantage of breeders, because, according to our observation, the narrower the range of prices the easier it is to get fair prices for the ordinary quality breeding stock—and that (if the truth must be told) is what the average advertiser has most of, and of late years has had most difficulty in selling.

The tendency of advertisers to hold back advertising until they have goods ready for delivery, or until advertising brings lots of inquiries, checks the building of business at this season and reduces the momentum of trade when the season really opens. Too many advertisers have of late years been "taking profits," bidding eagerly for the trade of those who wanted what they had to sell, but neglecting the prime function of advertising which is to educate and convince those who do not know what they want to buy.

We know how to sympathize with advertisers who feel that they have to make every dollar spent in advertising count. The writer was an advertiser of poultry for many years before engaging in poultry journalism, paid many a bill for advertising that, so far as he knows, never brought him in a cent; and as a publisher he has to hedge on expenses probably as hard as any advertiser. But that does not alter the fact that this curtailing of expenses that we all do because business has dragged so the last three years, operates to slow down the revival of business.

A prime reason for the reluctance of advertisers to put out advertising (and money) is that every experienced advertiser knows that under existing conditions he pays two or three times as much as he ought to to "cover" his territory. The "poultry advertiser" in the United States has been bled to a "fare-ye-well"—not because those who did the bleeding regarded him as a victim, or had any animosity toward him, but because circumstances had more effect than foresight in the development of advertising mediums.

Nothing is more certain than that the present conditions cannot continue indefinitely, but it appears equally certain that the remedy must be left to time because of the difficulty of securing deliberate concert of action to effect a change. Breeders and other advertisers, individually, do not like to antagonize publications because of the power of a publisher to injure the individual advertiser. Advertisers, collectively, could handle this situation, but they never do, because each is

too fearful of the immediate effects upon his own business. So, it seems likely that business will improve slowly until, in spite of such handicaps, it has gathered enough headway to make marked progress. The improvement seems to us sure and steady, but not swift.

A "Campaign" That Should Be Promptly Checked

WE ARE informed that poultry departments in agricultural colleges and experiment stations in a number of other states are preparing to inaugurate campaigns to eliminate "bacillary white diarrhea" on the same lines as the movements in Connecticut and Massachusetts. The information comes in a personal letter to the editor and is given as an argument in support of what has been done here.

We have stated in another article in this paper the facts as we know and understand them in regard to the prevalence of white diarrhea, the practical value of the proposed method of testing stock for the germ of bacillary white diarrhea, and as to the control of this or any other disease, simply by good poultry practice without recourse to the products of the pharmacy or the facilities of the laboratory. Here we will give some other facts and suggestions for the consideration of those whose vital business interests have been or may be seriously damaged by such campaigning.

The first thing to consider is that the mass of those interested in poultry, but not well informed in poultry matters, accepts without question what is given out from an agricultural college or experiment station; and that such being the case the methods of the experiment stations in investigating and reporting investigations in this line had created a widespread impression that the prevalence of "white diarrhea" made operations in poultry culture so hazardous that it was not wise for anyone to engage in them unless absolutely assured of freedom from the disease. This attitude of prospective poultry keepers and buyers of poultry stock has been one of the principal causes for the failure of poultry culture to keep its normal rate of development.

Having created a general atmosphere of suspicion of all poultry stocks, the investigators of bacillary white diarrhea found themselves in a position where many people turned to them for information where stock free from the disease alleged to be so troublesome could be obtained. So they began to seek for some method of testing birds to determine whether they harbored this particular germ. The method of examining the eggs was first tried, but although engaged in with confidence was soon discarded because of the small proportion of infected eggs laid by infected hens. What is called the blood agglutination test was then adopted. We are not able to learn that any adequate demonstration of the practical value of this test has ever been made. Assertions that its value is definitely established are not supported by such specific proof as ought to be forthcoming if the experimental work will fully substantiate the claims.

But, on what has been done, and on the claims made for this test, two poultry departments have undertaken, and it is said that others propose to undertake, to test hens to determine whether or not they are carriers of the germ of bacillary white diarrhea, and in this way to exercise a species of control over the business of poultry breeders.

The method of procedure is to invite breeders to have their fowls tested; to "certify" fowls that pass the test satisfactorily; and to refrain from giving any publicity to breeders whose fowls do not pass the test. The result of this is to give advertising to those breeders whose stock is approved on this test, and in doing so to direct suspicion against all other stock whether it has been tested or not.

Such a procedure is illegal, without lawful authority, and is also, we believe, without precedent. If a disease is a public menace, the proper procedure is for the legislature to so declare it by law, at the same time making provision for general inspection and for giving such publicity to the results, and for taking measures for its control as are for the public welfare.

In such matters, "law" acts upon just the opposite principle from that upon which these white diarrhea regulations proceed. It provides for inspection of all, and for segregation of infected specimens with due warning to the public to prevent people from coming in contact with them. Under law what is not condemned is thereby "certified," but under this usurpation of authority, there is to be partial inspection, according to chance and the convenience of the inspectors; they certify such of what they happen to inspect as meet their

"test," and conceal the facts as to what they condemn, leaving everything that is not inspected under suspicion, and the public unwarned of the places where, according to their inspection, danger exists.

If such a situation as this is allowed to continue and extend, poultry interests in this country will grow worse and not better. Everyone economically interested in the development of poultry culture needs to understand clearly that the only way to deal effectively with such a situation is to stop the propaganda at its starting point. If we allow educational institutions, acting without justification in fact or warrant in law, to do things injurious to the industry, giving frequent and wide publicity to statements which are misleading and which deter people from engaging in poultry keeping and from extending operations with poultry, we allow the development of distrust and prejudice which ought never to have been suffered to arise and which, as long as it continues, adds to the labor and cost of the efforts of everyone engaged in any line of poultry culture to build up business.

TWIN OAK POULTRY FARM

Where the Editor is Again a Poultryman

THE Twin Oak Poultry and Egg Company, of Williamstown, Mass., was organized four years ago by Dr. H. J. Pierron and Mr. Wm. F. Cameron. Dr. Pierron was retiring comparatively early in life from a large and lucrative practice in the city of Brooklyn. Mr. Cameron was a New York business man who, as the result of a growing interest in country life, had decided to dispose of his business and engage in poultry keeping.

As men of broad experience and success in other fields, their plans were for a large plant, eventually, but they built at first a plant only as large as was necessary for a suitable instruction plant for themselves and to warrant employing in addition one general utility man who had the makings of a poultryman and would learn with them.

The second season the capacity of the plant was doubled, and this provided for the increase in stock until this year, when it became necessary to considerably enlarge equipment for all stages of operations. The business had now reached the stage where it was quite clear that to provide for further expansion at the rate required to supply the ever widening demand for the farm's products, plans for increasing production must be carefully worked out for a term of years, and new equipment added, breeding operations mapped out, and arrangements made in every department to meet the future requirements.

For this work it was decided to obtain the services of an experienced poultryman having a wide acquaintance with all phases of poultry culture. It is in this capacity of expert adviser in all that relates to practical productive work that Mr. Robinson is employed by The Twin Oak Poultry and Egg Company. He is at the farm for a week or more each month, remaining as long as is necessary to acquaint himself with conditions and results at the time, discuss these fully with the proprietors and the superintendent, Mr. Roy H. Middlebrook, give full directions in regard to changes in practice that after consultation it had been deemed desirable to make, and make such notes as he needs of matters to be considered in the work for the farm which can be done elsewhere as well as on the ground.

The prime object of the T-O-P Farm is to supply quality table poultry and eggs to high class family, hotel, club, and retail trade. For this purpose it keeps Barred Plymouth Rocks and Single Comb White Leghorns which conform to general Standard requirements, for their kind, but are bred with special attention to utility properties rather than to refinements of form and color that make value in exhibition birds. It sells breeding stock of this class, eggs for hatching, and day old chicks, but its offerings of these are limited to the excess of each over its own needs—its first aim always being to meet as fully as possible the steadily increasing demand for its table products.

Beginning with our November issue we will have a department of "T-O-P FARM NOTES," in which Mr. Robinson will report whatever of interest to poultry keepers in general occurs at this plant. Such notes will include also items relating to the marketing of the products of the farm. Names of buyers or any other information that business men keep to themselves will, of course, not be given; but in whatever can be of public service without prejudice to its own interests, details of selling methods at T-O-P Farm will be available to readers of this paper.

INCREASING THE EGG YIELD IN LARGE FLOCKS

EDITOR FARM-POULTRY: Would you give us your advice as to best way to improve stock, increase egg yield of our flock (1,000 White Leghorns)? Has it been proven that males from high producers will do it? Does trap nesting on commercial plant of this size pay? Is it necessary?

An expert from Cornell poultry department selects our flock each year. We select our flock continually, to the best of our knowledge, and cull out early molters. Up to what time should molters be culled out? The Cornell poultry department does not advise trap nesting on commercial plants. How much of the fuss being made over trap nests and high producers as getters of high producers is to be taken seriously by a commercial man? How much has been really proven? We are advised not to get new blood for our stock for five years. Stock is large and vigorous. In reading your paper I have never been able to get these answers definitely out of it. If I have not seen the right articles will you kindly advise me.

F. E.

I have held this letter for some time awaiting further information needed to enable me to answer in particular the questions relating to Mr. E.'s stock. As this has not arrived and as questions lying long on my desk are apt to be unanswered if newer inquiries are furnishing sufficient material for the paper, I think it best to answer the general questions now, at the same time indicating for the information of other readers who may have similar

questions in mind what I need to know before undertaking to advise in any particular case.

The first point is as to the need of improving the egg yield. What is it now? The exploitation of laying competitors with attention focussed on the few pens of remarkable performers tends to create entirely misleading ideas and false standards of good egg production. This has always been the effect of giving much publicity to the high records secured from small numbers of hens under exceptional circumstances, when the exceptional character of the results was not fully emphasized and the cost of securing them was not considered.

For hens in large flocks, as they must be handled commercially, an average of 150 eggs per year is good laying and if it does not give a good profit the fault is with the management, not with the hens. This average is also as high as is desirable for the birds used for breeding, for few hens will go much beyond this and produce at the breeding season eggs that will give satisfactory offspring.

The popular understanding of what some of our experiment stations have given out about the "transmission" of high productiveness being through the males that are sons of high producing hens seems to be that all sons of high producers transmit high producing capacity. I know of no experimental work in which tests of sons of high producers have been so comprehensive as to demonstrate this. The work of the Maine Station which is of most importance seems to me to be seriously at fault in that the classification of hens as high producers is based on their production prior to March 1st. Matters of interest relating to such

a method of determining the grade of hens as egg producers will be found in the article by Prof. James E. Rice of Cornell, reprinted in this issue.

Trap nesting and pedigreeing according to egg records on a large scale are not practical on any plant unless the cost and something more can be secured by increased sales of and higher prices for birds sold for breeding purposes, and I doubt very much whether they can be done profitably very long for that, for in common practice results depend more upon care than upon inheritance.

Selection by appearance, taking the most vigorous and well developed specimens as breeders is the only practical way to breed for high production on a large scale. With occasional exceptions the hens that are best by this standard are the best layers. It costs less to feed the few poor layers there may be among them than to find out which they are. The idea that any proportion of good looking hens such as a poultryman of any experience would pick out as his most likely layers and most desirable breeders are worthless or very inferior producers is not in accordance with the observation of most experienced poultry keepers.

When one is starting a line of breeding from a particular individual, or individuals, he does a certain amount of careful pedigreeing at first because in the beginning he wants this special mating, or matings, to be according to certain specifications which can be met only with a few individuals. But as his work in breeding this line proceeds, he is soon in a position where he has many females that are full sisters to use in the same pens, and many males of like breeding to make duplicate matings, and as the num-

bers of birds of the line or strain increases, and he begins to secure a general uniformity of type in birds of the same original blood, the particular ancestry of the birds becomes of less and less consequence, and he can usually progress faster toward high average excellence in his flock by mating on appearance without regard to pedigreeing than by attempting to follow certain pedigree lines. For consistent progress in any line of breeding it is necessary that the number of matings each year should be considerable, and should include the most superior individuals, each mated as far as possible to secure its full breeding value. Rarely will all matings give the desired results, but with many matings having the same objects in view, the chances of securing a large proportion of birds of the desired character are greatly increased.

I would not cull out early molters unless they appeared to be otherwise out of condition, undersized, or lacking in stamina. Early molters that are thrifty and molt quickly often make very good fall layers, and if they are birds suitable for breeding, a partial molt in early winter may not be a disadvantage. When you are keeping hens as layers, the best general rule in culling is never to dispose of a hen that does not seem to be past usefulness for that purpose while you have room for her.

Everyone, of course, would like to have his laying hens all of the nicest type, and supposed to be able to give the maximum profit. But it does not often happen that a plant of any considerable capacity can be fully stocked with that class of hens. Most poultrymen have room for a considerable proportion of the hens and pullets that they regard as inferior for laying

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"WATCH THE PALACE SHOW"

purposes, and it is often better to keep the inferior layers as long as they will lay at a profit at all than to try to dispose early of everything not expected to reach a high standard of production.

When crate fattening of poultry was being exploited some years ago, it was found that the principal factor in making it profitable was judgment as to which birds would stand it, and how long they would stand it. Crate fattening is a comparatively short process, and its effects are more easily judged than the probabilities of egg production, yet it is none the less true that profitable egg production, on a large scale, depends upon ability to decide with a reasonable degree of certainty when the hen's usefulness is at or near its end.

With regard to introducing new blood in this flock, I don't know on what grounds anyone supposing there was no occasion for it for five years would assume that it would be necessary to introduce new blood at that time. If I had the reasons I might have an opinion on them.

not complimentary to fanciers, or of "Standard" stock not in strict accord with the orthodox view of its exclusive superiority. If they state things as they are, they certainly must do so occasionally if only to correct the prevailing exaggerations about the superiority of standard bred poultry and the devotion of breeders to the development of utility qualities.

As an illustration of the kind of statement that provokes contradiction, take this from one of Mr. McReynolds' editorials: "Every Standard breeder of poultry knows that the producing power of his flock measures their value as well as does the Standard requirements. For that reason they have always tried to develop egg production. The fact is, no other people has ever tried to do it."

That statement may be correct as far as Mr. McReynolds' knowledge and observation go, but it is a long way from being true. A great many fanciers pay no attention to egg production. I know fanciers who are good breeders who have

men as poultrymen that Mr. McReynolds gets on slippery ground. He says: "I have yet to meet or know a man connected with an agricultural college or station or that is gallivanting over the country lecturing on poultry that ever succeeded at either market or standard poultry breeding. Name one, will you?"

Well, A. C. Smith, of Minnesota Agricultural College and D. J. Lambert, of Rhode Island College were generally rated expert poultrymen qualified for either branch of the business long before the beginnings of educational departments and much longer before either of them went into this line of work. Up in this part of the country it is the custom to get successful poultrymen to do as much lecturing as possible, and some of them have done considerable gallivanting. Jas. E. Rice, of Cornell, and W. R. Graham, of Guelph, could without doubt make quite as good an experience with poultry showing as most of the poultry journalists. They belong to the school of poultry educators that did not get their training under modern conditions.

Of the present day school (I judge from what I have seen and know of them) the greater number of those in college and station work are men who would probably have followed some branch of poultry production with credit had they not gone into the field that they did.

The demand for men for college and station, and national and state agricultural department poultry work has increased so much faster than the supply that this has been the most attractive field for men who added to a respectable capacity for poultry culture the other qualities needed for educational work. A number of those who went into that line first have turned to practical poultry keeping and seem to be making it go. On the whole, the men in poultry educational work compare favorably with those in poultry journalism for practical experience with poultry.

I am perhaps as ready as any other poultry journalist to criticise any phase of government work with poultry or for poultry interests when specific occasion for doing so is presented. And occasionally I have reason to suppose that my comments are resented and taken as personal affronts, and produce some measure of ill will toward me. But I try to keep in mind that they are pioneering in a difficult field, and that they have to learn by their mistakes the same as the rest of us did—and are still doing—and without sparing criticism on that account I can say that, as far as I can see, the men in educational work are learning as fast as any of us did.

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Headquarters of Poultry Department at Macdonald College, Quebec

INSTRUCTORS AND INVESTIGATORS AS POULTRYMEN

IN THE *Southern Poultryman* for August, Editor J. G. McReynolds devotes several editorials to criticism of instructors and investigators in poultry at agricultural colleges and experiment stations. As to the specific things that he criticises I agree with him at about every point, but I think that he is at fault in condemning the agricultural college and station poultrymen generally for the errors and blunders of a small part of their number, and perhaps also in making his judgment of particular individuals so positively on their shortcomings in matters under consideration.

His statements generally seem to me too sweeping. Thus when he says: "I cannot understand why the men employed at the experiment stations and colleges should be everlastingly prating about Standard breeding destroying the producing power;" and when he refers to teaching to the same effect by "men paid by the state or Federal government who are 'pironetting' over the country 'teaching' the farmers that the Standard poultry breeders are absolutely destroying the producing power of poultry," he seems to me to be attributing to this class of poultry workers an attitude which I have never had any reason to suppose was taken by more than a very few of them. I know of only one man among them who has taken such a position of antagonism to Standard poultry, and I have long been more than half inclined to believe that he did it more as an easy way of advertising himself than from conviction.

It is quite possible that some of the poultrymen teaching and lecturing at times, express opinions of "fancy" stock

some very good laying stock and some that is not good laying, these being distinctly different lines of breeding—and though this condition has existed for years, they apparently are not disposed to make any direct effort to improve the egg production of the poorer laying stock. Good, bad, or indifferent production they take as it comes.

That attitude is very prevalent among fanciers. In (I think) the majority of cases of those who devote their attention to Standard requirements the good laying stock has that property because, as a rule, it will go with good development.

Some of the best laying stock I have ever known was produced by people who knew nothing about the Standard or breeding to Standard requirements, and by people who, without being ignorant of these, simply took any poultry they happened to have and because they were good at handling any kind of live stock made good poultry and good layers of what they had.

Mr. McReynolds declares that the college and station men have been dependent upon poultry papers for most of the matter they put in bulletins. This point is well taken, but that is not altogether their fault. In large measure they have been made victims of an unintelligent public's demand for information with the official brand upon it. But at that, most of us who are purveying information for poultry keepers gather a good deal of it from older writers, and certainly the extent to which some of our poultry journals use the bulletins which colleges and stations afford them free in preference to original editorial and contributed work, is likely to make authors of such bulletins feel that they are producing the best matter in these days.

It is, however, when he refers to the qualifications of the college and station

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ANOTHER ILL-ADVISED CAMPAIGN AGAINST WHITE DIARRHEA

FOLLOWING far in the wake of the Storrs Agricultural Experiment Station of Connecticut, the poultry department of the Massachusetts Agricultural College has projected what it calls a "Campaign to eliminate bacillary white diarrhea." It has sent out notices to the press and to poultry keepers individually throughout the state affirming that:

"1. White diarrhea is common in this state and is the occasion of great loss.

"2. The disease is transmitted by the hen laying the egg.

"3. Hens harboring the bacillus can be detected by a laboratory test of the blood.

"4. If such hens (reactors) are eliminated from breeding flocks, losses of chicks from bacillary white diarrhea, with proper sanitation, can be practically entirely avoided. This fact has been demonstrated by tests made both in the Massachusetts and the Connecticut Experiment Stations.

"5. The facts above stated must make it apparent that a campaign for the elimination of this disease is desirable and practicable. Breeders have simply to cease using eggs from reacting hens for hatching and the disease will soon disappear."

This statement of the case is a fine example of a statement vague in substance but quite definite in form and so misleading to those who do not construe it literally and with due consideration of the way those who make it provide ways of escape in case they should be called to account. The popular misnomer "white diarrhea" and the phrase "bacillary white diarrhea" are used each in the connection which best serves this purpose. We do not judge whether this is intentional or just a manifestation of the safety first instinct which seems to be almost universal, but the fact is evident to anyone able to analyze plain statements.

Granting that there is "bacillary white diarrhea" that is transmitted through the eggs, and that this causes losses, we venture to affirm that an itemized statement of the cases known to the people at the college as indubitably of this class, and of the extent of the losses due to them, would not be accepted by poultrymen as warranting the assertion that "bacillary white diarrhea" is common and the losses from it are great.

The casual reader also will not notice that even after he has secured hens certi-

fied free from the germ of bacillary white diarrhea he is not assured of freedom from it unless there is proper sanitation. This is a virtual admission that the statement that the disease is transmitted through the eggs is only a half truth. With regard to troubles commonly known as white diarrhea in chicks, the most common causes are wrong brooding temperatures and improper feeding. Any dealer in day old chicks can cite numerous cases of chicks from the same hatch being perfectly thrifty in the hands of one purchaser and reported by another as dying off rapidly with white diarrhea.

I was probably better acquainted with the worst real case of white diarrhea that ever occurred in this section than anyone but the owner of the farm. It was a plain case of contaminated land. No young chicks would thrive on it until it was renovated. With tillage to purify the soil, the owner found chicks growing well again.

Within the past few years a number of cases of so-called white diarrhea have been reported to me that upon investigation were remedied by changing the feed or making some alteration in arrangements for brooding. I don't know and never have known of any poultry yard or farm where there have been heavy losses that could not have been avoided simply by good poultry practice. If there are such I am anxious to be shown. I am always willing to learn. In conversation with a college man who claimed that their exploitation of white diarrhea was necessary and a good public service, I asked him what kind of plants were furnishing them with specimens of white diarrhea carriers. He admitted that they were plants where conditions were bad, but he did not seem to appreciate either that it was short-sighted policy to give such poultrymen hopes that they could go on with bad practice and raise good chickens; or to realize that for a college or station to exploit white diarrhea as they are doing at Storrs and Amherst was unwarrantably injurious to poultry interests.

Here is something else for the breeder who may suppose that he can profit by having his stock tested and certified free from bacillary white diarrhea to think over.

I know a man who tried that last season. His stock is to all appearances very thrifty. He thought it was of course free from "the deadly germ." But the hens he had tested were reported "reactors." At first he felt blue, but coming to his senses, decided to use them anyway. I have never seen stock in better condition than this man's is — both old and young.

As a matter of fact, I was led to visit his place because so many people who had been there remarked the vigor of the stock. After I had been all over his place and told him what I thought of it, he related his experience with white diarrhea tests.

The white diarrhea propaganda and scare not only give people altogether wrong impressions of conditions in poultry keeping, but operate to prevent beginners from learning poultry keeping. A commonsense consideration of the facts as observed in poultry yards, and as brought out at the experiment stations, indicates that the germ of bacillary white diarrhea is probably present in nearly all stock, but that it does not cause trouble unless conditions favor its abnormal increase. If people know and realize that, it is a comparatively easy matter to get them to make necessary changes in practice; but as long as they think that they have to contend with a disease that is "hereditary" and may be transmitted by apparently healthy birds, you can't tell them anything about their methods being wrong.

Another "World's Record" Layer

According to a press dispatch sent out from Philadelphia under date of September 26th, the world's record for laying in laying competitions had just been broken by a White Leghorn hen in the Philadelphia American - Delaware Agricultural College competition at Newark, Delaware.

This hen is credited with 287 eggs in 330 days. It is said that the record previous performance was 286 eggs in 365 days.

I don't keep track of "records," not being a laying competition "fan." I think, however, that it is a foregone conclusion that records will continue to be broken as long as there is any possible margin between the last highest and 100% production for a year, and then for any period beyond a year.



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Dark Cornish (Indian Game) Male

THE CORNISH (INDIAN GAME) FOWL AND THE "SCALE OF POINTS."

ABOUT four years ago I began to challenge persons who believed that the "scale of points," which is supposed to be fundamental in the "Standard" and in the judging of fowls, is what it is supposed to be. I went so far as to offer to pay \$50—which, as compensation for articles about poultry goes, is a high price—to anyone who would send to FARM-POULTRY an article in which it was proved that the "scales of points" which, in the "Standard of Perfection" are assumed to be fundamental and essential, had anything at all to do with the judging of fowls by the "Standard."

No one even took this up. No one ever will. I might as well have offered \$50,000 (except that everyone would know at once that was more than any poultry journal ever had in reserve). For, just as soon as anyone undertakes to demonstrate that the "scale of points" is what it is asserted in "the Standard," and

what he therefore has supposed it to be, he wakes up to the fact that it has "nothing to do with the case." Again and again I have written to persons who, in articles in the poultry press, have professed their faith in the idea that the "scale of points" is the foundation of judging and, incidentally, of the whole poultry fancy, inviting and urging them to send me for publication in this paper an article demonstrating this. No one has ever replied. I never expected anyone to reply. I did not publish my views about the actual value of the "scale of points" in the Standard until I was sure of them.

After you have seriously undertaken to analyze it, and get at the facts in the case, it seems almost unthinkable that for so many years so many men have made poultry (and other) standards, and judged poultry and explained the philosophy of judging on the assumption that the scale of points was of prime importance; but it isn't so strange after all when you consider what fallacies and errors have been cherished by men.

As soon as I can get time to do it properly I am going to take the scales of

points in the latest "Standard," and the various statements relating to them in that "Standard," and discuss their relations thoroughly. Just now I want to take up one breed of fowl and its relation to the theory that the "scale of points" is the basis of valuation of "Standard bred" poultry. That breed is the Cornish (Indian Game) developed in England sixty or seventy years ago, introduced to America about twenty-five years ago, and described in the "American Standard of Perfection" for the first time in the edition of 1894.

If you will take the "Standards" of 1894, 1898, 1905, 1910 and 1915, and compare the verbal descriptions of the fowls which in the first is called *Cornish Indian Game*; in the next, *Indian Game, Cornish*; in the next, *Indians, Cornish Fowls*; but classed with "Orientals," and in the last called "Cornish" and put in the English class, you will find as in the accompanying table:

When the Cornish was put in the English class its scale of points was radically changed. Only three out of seventeen sections remaining the same. There had been changes in some sections before; some of them relatively large changes, but nothing sweeping.

The English class, before the inclusion of Cornish, comprised the Dorkings, Red Caps and Orpingtons. The Sussex have since been added. It is natural to suppose that if scales of points are of fundamental importance in applying the score card, that when a breed from a class with a scale of points as different from that of the English class before the Cornish was put in it, is put into such a class, the scale of points for the class, as now constituted, would be adjusted to meet the new situation by changing in the direction of the former requirements for the new member of the class. But what was done was to change the English class to conform closely to the American and Asiatic classes.

What has been done with the Cornish in regard to scales of points is enough to show that the scale of points is not a material factor. But, aside from this, it is plain to anyone who cares to make a tabulation of the present scales of points and compare this with those in previous Standards, that the Standard makers are steadily drifting away from the idea of different values for the same sections in different breeds or classes, and that every move is taking them nearer and nearer to I. K. Felch's "Decimal System."

The scale of points is immaterial in either case, but in view of the long and often violent opposition to the decimal idea it is highly interesting to see its opponents gravitating toward it.



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T. E. Quisenberry who went to San Francisco last spring as superintendent of poultry at the Panama-Pacific, has been made Assistant Chief of the Department of Live Stock.

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Winter Eggs
And For
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GRAN-O-LAC is a pure, soluble product made from the buttermilk as it comes from the churn. It is high in lactic acid, and contains all the soluble contents of the buttermilk. Therefore, it will do the same wonderful work that buttermilk does, while it eliminates the handling of sloppy, foul smelling cans, and also makes possible a regular, uniform supply.

It makes hens lay and it makes stock fatten up nicely. Send 2c. in stamps for sample and literature. Taste GRAN-O-LAC; note its natural acid flavor—and then get a quantity and watch your birds.

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Scales of Points That Have Applied to Cornish Indian Games in America															
	1894			1898			1905			1910			1915		
	Shape	Total 8	Color	Shape	Total 8	Color	Shape	Total 8	Color	Shape	Total 8	Color	Shape	Total 4*	Color
Carriage															
Beak,	1	3	2	1	3	2	2	3	1	1	2	1	2	4	2
Head,	1	2	1	1	2	1	1	2	1	3	4	1	2	4	2
Eyes,	1	3	2	1	3	2	1	3	2	2	4	2	2	4	2
Comb,		3			4			6			6			8	
Wattles,		2			2			2		1	1		2		2
Ear lobes,	1	3	2	1	3	2	1	3	2	1	2	1		4	
Neck,	4	7	3	4	7	3	4	7	3	4	7	3	4	8	4
Back,	4	7	3	4	7	3	4	7	3	4	8	4	6	10	4
Breast,	6	10	4	6	10	4	6	10	4	6	10	4	6	10	4
Body and stern,	4	8	4	4	8	4	4	8	4	6	9	3	5	8	3†
Wings,	4	8	4	3	7	4	3	7	4	4	8	1	4	10	6
Tail,	4	8	4	4	8	4	4	8	4	4	8	1	6	10	4
Legs and feet,	4	8	5	4	8	4	4	8	4	6	9	3	5	8	3
Condition,		6			6			6			4			4	
Harmony of feather,		4			4			4			4			—	
Weight,		10			10			8			4			1	
*Symmetry.															
†Body and fluff.															

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That have been bred for utility and exhibition excellence. They are profitable producers of eggs and meat of highest quality, and as prize winners are entitled to rank with the best, winning at Boston this year first and special on pullet, second pen, fifth cockerel. Such winnings are not accidental, but are the result of steady development year after year. It should pay you to test the merits of this stock. Prices are reasonable.

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Rose Comb White Minorca Cockerel

SCRATCHINGS FROM THE NEW LITTER OF OUR EXCHANGE TABLE

IT MUST have been very potent fire water that was used to get Patrick Henry Jacobs drunk and amenable to efforts to persuade him not to expose Sid Conger when Jacobs had "proof" that Conger was getting birds from someone else to show at Chicago some thirty years ago, as related by Theodore Hewes in the last issue of *Everybody's Poultry Magazine*. How else did the lines of type in this particular article get so mixed that many passages are unintelligible?

Mr. Robinson, editor of FARM-POULTRY, is right when he states that we will make no personal charges against any man in our campaign to abolish the solicitor-judge from soliciting and advertising at the same shows. Several months ago, when we started this campaign, we stated we would see it through to a finish on its face value, basing our arguments on how it affects the fancy poultry business, and along this line we shall continue."—F. W. De LANCEY, in *Poultry Press*.

Since Mr. De Lancy seems to have missed the point of my remark, and in this, as in several recent instances, makes references to things I have said, which seem to show me in agreement with his views when the contrary is the case, I will say plainly that Mr. De Lancy will not make personal (or specific) charges against anyone because he either cannot or is afraid to. Now will he say which of these is the reason? If he is so anxious to cite me, let him say which of these alternations. John Robinson is right.

As another awful warning to advocates of score card judging, J. H. Drevstedt in *American Fancier* says that at the World's Fair in Chicago, 1893 "about 3,000 birds were exhibited and it took the twenty-one judges from October 18th to October 24th to make their decisions. The score card was used, which was chiefly responsible for the long delay occasioned in posting the awards. As some of the advocates of score card judging are clamoring for the restoration of this antiquated system of adjudicating classes at modern poultry shows, the above leaf taken from the pages of the history of score card judging may refresh their memories and make them think before they act: "Safety first" will also apply in this case. Since that fiasco at Chicago in 1893 few, if any, of the larger poultry shows in the United States were judged by the score card."

Does "Drev." seriously and soberly ask us to take his word for it that the chief cause of this protracted judging was the use of the score card? Does he want us to believe that twenty-one judges could score only between four and five hundred birds a day—say two dozen birds a day per judge? While I was not so situated at that time that I knew what was going

on as well as I have since a few years later, my recollection is that the poultry department at the Chicago exposition did not make a reputation as a model in any respect. If I am not in error it was freely charged that the management was incompetent and there was a good deal of feeling over alleged sharp practice of an official who was also an exhibitor.

In connection with his correction of my error in regard to the judging at the 1891 Garden show, "Drev." admonishes me that: "It's bad enough to have rats in your cellar, but when they begin to take possession of your garret it's hell."

Thanks again, "Drev." I don't doubt that you write from personal experience and with a sincere desire to help me to avoid the same.

"Come again!"

Great Shrinkage in a Claim of Sex Control

H. E. S. to whose claim that had a stock of fowls with an inherited tendency to produce 90% females allusion was made in our September number turns out to be Herb. E. Sharp, of Spokane, Wash.

Mr. Sharp refers me to various similar claims that he has made and to various statements by others which he supposes confirm his views. He mentions as especially worthy of attention an article by him in the *American Poultry Journal* for March. He resents my calling him a liar. (Of course I didn't call him a liar, but that is neither here nor there). He says that he has been called a liar 150,000 times. He says that he has spent thousands of dollars experimenting in breeding, and that it will cost me \$250 to test a trio of his birds. In this he is mistaken. After reading his letter I would want considerably more than that deposited with me before I would bother with them. The claimed percentage of females shrunk from 90 to 80 and then to 70 in his letter. At that rate there would be nothing left of the tendency to produce females by the time I could write to him and receive a reply.

Also after looking up his article in the *A. P. J.* I can't take his views on such matters seriously.

The Massachusetts Poultry Society

The adjourned annual meeting of this society, held at Worcester, Aug. 7, 1915, witnessed the accomplishment of plans which have been under way for nearly a year for a union of all the poultry interests of the state with this organization. The members of the Massachusetts Poultry Association (Inc.) having voted to unite with the Society, it was unanimously voted to enroll all the members in accordance with their standing in the association. Thus has been unified the interests of all those interested in the work for more and better poultry in our state.

After the necessary formalities of the union had been carried out, the following

list of officers were elected to hold office until the next annual convention at the Massachusetts Agricultural college in July, 1916:

President—Maurice F. Delano, Vineyard Haven. Vice-President—Prof. J. C. Graham, Amherst. Sec'y-Treas.—Chas. H. Wood, Worcester. Executive Committee—The three officers ex-officio; W. E. Blodgett, Agawam; Helen T. Woods, Silver Lake; Dr. N. W. Sanborn, Holden; Samuel Knowles, Easton. Election Commissioner—John H. Robinson, Boston.

There was a splendid attendance of men and women from all parts of the state interested with the practical questions of poultry raising. Many interesting subjects were brought up for discussion, and all were referred to committees for action. Among the more important were the following:

1. There has been many calls on the department at the college for the printing and distribution of the more important addresses made at the annual poultry convention, and the society will take up the practicability of doing this and furnishing the same to its members.

2. It is the purpose of the society to aid local poultry clubs and associations in spreading information needed to accomplish the best results with poultry.

3. To create and maintain a department for the purpose of co-operation with the poultry department of the agricultural college.

4. To consider the need and the demand for holding of exhibitions in various parts of the state of eggs and dressed poultry.

5. The president and secretary were elected a committee to guide the interests of the poultry raisers and shippers where they are endangered by quarantine regulations made on account of the foot and mouth disease of cattle.

6. The society will adopt and furnish to its members seals to be used for the guaranty of first quality eggs. Mr. Chas. E. Allen, of Abington, was placed in charge of this work.

7. It appeared that there was a serious need of more funds from the state to carry on the necessary work for the control of poultry diseases, demonstrations, lectures, and other extension work, and the society voted to ask the next legislature for an appropriation of \$5000 to be expended by the poultry department of the college along these lines.

The society earnestly solicits the interest and support of everyone. The charges are very small,—\$1 pays for the first year, and the dues are but 50c. per year thereafter. The secretary will gladly furnish any desired information.

W. E. Baunnert, of California, sending a dollar for five years' subscription, writes: "I have taken a great liking to your paper, a few copies of which have come to me through one of your subscribers here. It is so different from the poultry journals I am taking now, (or, by the way, dropping now, one after the other). 'Tis so free from exaggeration and poultry booms."

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White Plymouth Rocks

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THE OLD RELIABLE
LAMBERT'S
DEATH TO LICE

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Successful Poultrymen
Because It Insures
Clean Fowls

Is just the thing for sitters, as it does not harm eggs or chicks. Keep your hens free from lice and they will thrive and be profitable. 100 oz. \$1.00; 48 oz. 50 cts., 15 oz. 25 cts. Large sample of Powder or Headlice Ointment 10 cts. "Secrets of Success with Poultry" by D. J. Lambert for 2c stamp.

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USE AND ABUSE OF PRIVATE SCORING

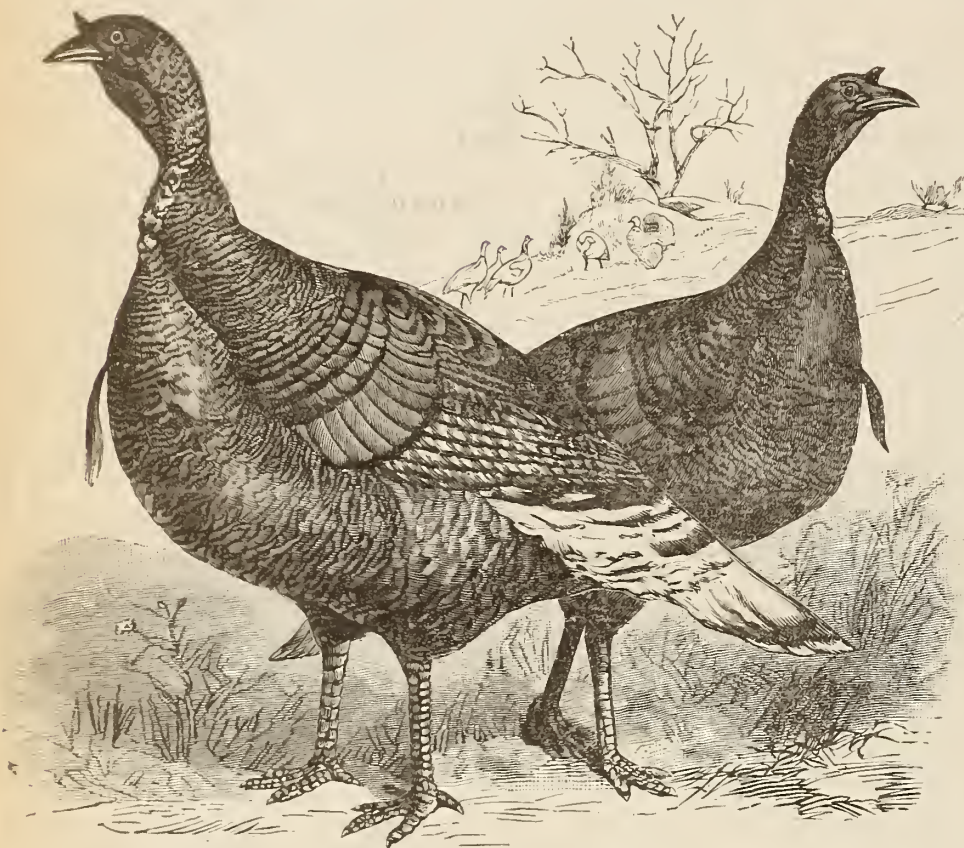
AS MENTIONED on our editorial page last month, if a few sentences in the "Instructions to Judges" in the new "Standard" are intended to be taken literally, the American Poultry Association puts its ban on private scoring of poultry, and forbids its members "to lend it their support as a selling method."

The principal objections to private scoring are that some judges engaging in it are said to apply the "Standard" less rigidly than when scoring birds in competition, thus inflating values, and that an owner scoring his own birds does not cut for faults as severely as he should, and so places too high a valuation upon them.

If scoring were an exact art in which judge's results agreed, and if prices of

the A. P. A. is the score card method, that is logically the method which many poultry keepers, and novices in particular, will regard as the proper method, and the most reliable one. Why should the American Poultry Association say to a breeder it is "not advisable" for you to have a judge score birds not on exhibition? If a breeder, for his own information and assistance, wants an expert opinion of certain birds, or of all his flock, there is no good reason why the records of the expert's inspection should not be made in the form of score cards. And if records exist in this form, there is no good reason why a breeder should not use them in making sales, whenever such records will help to make sales.

Because a buyer wishes to have a score card with a bird he buys, it does not follow that such a buyer is under wrong impressions as to the value of the score card. Most buyers who want score cards want them for the information they afford



Narragansett Turkeys

specimens were determined by score, there would be more force in these objections to private scoring. But scoring is only the best method that has yet been devised of securing a mathematical expression for the degree of merit of a specimen, and the score card as made indicates the location of its "faults" and the estimate of the person scoring of the seriousness of the fault.

If a judge in private scoring scores birds too high that soon becomes generally known. If an owner scores his own birds, and scores them too high, he is doing nothing essentially different, as far as his relations with his customers are concerned, than if he exaggerates merit or fails to mention faults in verbal descriptions of them. In any case a buyer can buy birds on approval and if they do not suit him can return them. If he fails to use this privilege that is his own lookout.

It will be generally agreed that a large proportion of those who are selling Standard bred stock can benefit by such advice in determining values, actual and relative, of their birds as a competent judge can give them. It is absurd to suppose that, as a rule, either breeder or judge has any inducement to be other than fair and honest.

When the method of determining merit in exhibition poultry most approved by

as to expert opinion of degrees in faults; or for a concise specific estimate of birds by the seller.

Any sensible breeder is naturally averse to selling a bird with a guarantee to score so-and-so, by someone else, at some future time; but anyone who has any confidence in his ability to price birds fairly, should be able to give a customer who wanted it a score card indicating his estimate of the outs in a bird.

If a breeder prefers not to do this, that is his privilege, but considering the popular attitude in a matter like this, and the fact that it is just the class of birds that are bought principally by the class of buyers that want score cards that have been moving most slowly for years, breeders who want business ought to consider whether it is good policy to cater more to this class of buyers, and not condemn the selling method that suits these buyers because abuses may be associated with it.

California Law Against Chinese Eggs Declared Unconstitutional

The law passed in California last winter requiring Chinese eggs offered for sale to be branded as such, and requiring bakeries, restaurants, etc., which used them, to post placards stating the fact, has been declared unconstitutional and void in one of the lower courts of that state.

Red Feather Farm

BARGAINS in breeding stock—from our "CHAMPION SENSATION" and RED PRINCE strains of Rose and Single Comb Reds—after July 1st EGGS at greatly reduced prices. Stamp for Mating and Price List
F. W. C. ALMY, Prop., Box 67, Tiverton 4 Cors., R. I.

WHY NOT ABOLISH TITLES?

A FEW months ago W. H. Card had an entertaining article in the *American Poultry Advocate* facetiously discussing the joys and sorrows resulting to a poultry judge from the custom of using that title.

A poultryman asked the writer in conversation the other day for enlightenment as to the significance of the title "Doctor" as applied to the divers "Doctors" among poultry writers, and also begged to be informed in particular why we stressed the "Doctor" at one time and at others referred to "Mr. Woods," when alluding to the editor of the *American Poultry Journal*.

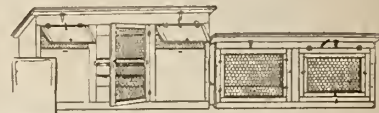
Of the well known "Doctors," Sanborn and Woods are doctors of medicine. The former practiced regularly for some twenty years or more, gradually discontinuing his medical practice only a few years ago. The latter practiced his profession intermittently for many years, but always seemed disposed to give journalism the preference when an opening in it appeared.

My habit of sometimes emphasizing the "Doctor" when mentioning Woods, and sometimes leaving it off, resulted from the discovery that he took it quite as a personal affront to have the "Dr." omitted from his name in print. I've never been at all particular about giving titles, sometimes writing them and sometimes omitting them without any thought that anyone would care whether he was "Dr." or "Prof." or not.

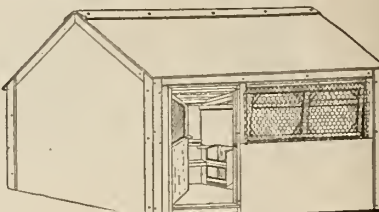
Some years ago there was occasion to print Woods' name and that of a minister in the same paragraph and without any idea of partiality I happened to prefix the *Rev.* in one case and omit the *Dr.* in the other. The next time I saw Woods he called my attention to the great injustice done him, and dwelt on the peculiarly aggravated nature of the injury when a "Dr." was slighted at the same time that a "Rev." was given the ordinary courtesy. Once Woods or anyone else let me see that he was sensitive on such points my natural cussedness would lead me to rub it in occasionally. In his case I've given an extra rub now and then because while solicitous about the form in his own case he is not noted for civility in his mention of others.

Doctors at experiment stations and colleges are usually either veterinarians or Doctors of Philosophy. The term *philosophy* as so used is an extremely broad one and may have been given for advanced work in almost any subject. The real

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Poultry Department Headquarters at Maryland Agricultural College

value of the degree depends upon the standards of the institution which confers it. The larger universities have of late years been advancing their requirements for this degree, but there are a great many persons entitled to write "Dr" before their names whose attainments do not add to the general credit of the degree.

There is no doubt that a great many people attach special importance to the statements of doctors and professors, and that in a way the title may be something of an asset to its possessor; but it may be noticed that our college and experiment stations rarely give the titles with the names of authors of bulletins, etc., apparently considering it better form not to do so.

The best usage would seem to be to give the name of a person and then describe him according to whatever position he holds that gives him prestige in poultry matters. There does not seem to be any good reason for regularly using in poultry journals a title or description which does not relate at all to the interest of the person in poultry. The first objection to doing this is that it would require a good deal more care than poultry writers and editors are accustomed to give such matters. Yet something of this kind should be done if we are going to try to give everyone his due as determined by an academic degree or position.

In a measure this is true also of such terms as *judge*, *editor*, etc. Though I often write editor as a prefix, I don't consider it good usage, and I've often thought that if the term "judge" is to be prefixed to those who award prizes to poultry at all, its use ought to be limited to those whose principal occupation is judging poultry.

A Laying Competition Bulletin

Bulletin No. 82, of the Storrs Agricultural Experiment Station, Storrs, Conn., "Third Annual International Egg Laying Contest," is the first that has been given the public on the series of laying

competitions held at the station. Although by no means a complete or a model report, we—and others will welcome it as the first effort to present to the public the kind of report that is the only real justification for such contests.

Readers who desire a copy of the bulletin should send their requests to the above address at once. Prof. W. F. Kirkpatrick advises us that the supply is limited, but that copies will be sent to all applicants until the edition is exhausted. We will publish extracts from the bulletin in a later issue.

Why Should an American Show Have an Alias?

Secretary L. D. Howell, of the Empire Poultry Association, writes us:—

"I quote from a letter received today from Secretary Cleveland of the Garden show:

"I notice in some of the publicity of the Palace Show that the phrase 'Crystal Palace of America' has been used. This phrase has been coupled for many years with the Madison Square Garden Show, and under these circumstances I know you will instruct your press agent to eliminate it from future press notices.

"I am the only press agent of the Palace Show, and I have never used this expression. I was under the impression that the Garden claimed to be America's Leading Show, but it appears that it is also 'England's only rival.' I shall put this matter to you without recommendation, trusting you will be able to decide the proprieties in the situation."

As Mr. Howell proves an alibi to the charge of using the Madison Square Garden show's alias, we take this letter as a notice to journalists who may have unwittingly mixed the aliases of the two shows in the metropolis, that they do so upon their own responsibility.

For ourselves we have to confess that we were not aware that the Madison Square Garden Show was or wished to be known as the Crystal Palace Show of America. The writer never uses such figures of speech himself, and never takes exception to a correspondent using them if he wants to. We would not even blue pencil it if either of our good friends managing shows in New York, or anyone boosting for either of those shows, would refer to one of them as "the Boston Show of New York."



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to the man who sells you your poultry needs—you do it because you know it to be the most efficient Roup Remedy that has ever been produced—but don't stop there:

Conkey's Roup Remedy IS unexcelled; we are proud of the wonderful record it has made, but Conkey's Roup Remedy is not one particle better than any other Conkey product, and there is a Conkey Remedy for every curable poultry disease.

They are all made to fill a want—not merely a package—and they accomplish wonderful results because every one of them has been prepared only after years of research, and of study of the disease to be treated.

The name "Conkey" on a package is your guarantee of the quality of the goods inside and it will therefore pay you well to always say "I want Conkey's" no matter what disease has developed in your flock.

Right now the following preparations are likely to be needed at any moment:

**Conkey's Roup Remedy,
Conkey's Roup Pills,
Conkey's Canker Special,
Conkey's Cholera Remedy,**

**Conkey's Bronchitis Remedy,
Conkey's Sorehead Remedy,
Conkey's Worm Remedy,
Conkey's Poultry Tonic.**

If your Dealer cannot supply you, don't risk your profits by taking substitutes, we will see that you are supplied.

Book we want you facts you'll be will help you your birds.



We've a valuable Poultry to have—it's full of glad to know—and it make more profits from Send 4c in stamps and we'll mail the copy at once. Send for it today.

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For many years the standby of successful poultrymen. Packages 25c; 50c; \$1.00 and 5 lbs. \$6.00. At your Dealers or by mail postpaid.

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Poultry Show Dates

New England States

Sept. 4-8, Norwich, Conn. W. W. Beckwith, S'y.
 Nov. 11-13, Pawtucket, R. I. E. J. Gibbons, S'y.
 Nov. 15-19, Holyoke, Mass. Frank C. Buck, S'y.
 Nov. 17-20, Wakefield, R. I. Geo. E. Harvey, S'y.
 Nov. 24-27, Taunton, Mass. C. L. Wheeler, Sec'y.
 Nov. 30-Dec. 2, Bellows Falls, Vt. G. S. Buxton, Sec'y.
 Dec. 1-13, Abington, Mass. Edward C. Cushing, Sec'y.
 Dec. 1-4, Providence, R. I. W. I. Brown, Sec'y.
 Dec. 2-4, Chelsea, Mass. H. C. Green, Sec'y.
 Dec. 8-11, Woonsocket, R. I. A. J. Richards, S'y.
 Dec. 11-17, Derry, N. H. E. A. Cross, Sec'y.
 Dec. 30-Jan. 1, Meriden, Conn. R. D. Marsden, Sec'y.
 Jan. 1-6, Bridgeport, Conn. John K. Slack, Jr., Sec'y.
 Jan. 11-15, Boston, Mass. W. B. Atherton, Sec'y.
 Jan. 26-29, Worcester, Mass. Chas. H. Wood, S'y.

North Middle States

Oct. 20-23, Sayville, N. Y. Ira Beebe, Sec'y.
 Nov. 16-20, Brooklyn, N. Y. R. H. Wilcox, Sec'y.
 Nov. 16-20, Paterson, N. J. Dr. G. Johnston, S'y.
 Nov. 22-27, Erie, Pa. J. F. Boyer, Sec'y.
 Nov. 22-27, Buffalo, N. Y. Wm. O. Jennings, S'y.
 Nov. 23-27, Red Bank, N. J. John Yeomans, S'y.
 Dec. 6-10, Palace Show, New York City. L. D. Howell, Sec'y, Mineola, N. Y.
 Dec. 7-10, Johnsonburg, Pa. H. L. Roussey, S'y.
 Dec. 14-17, Newton, N. J. J. S. Roe, Sec'y.
 Dec. 31-Jan. 5, Madison Square Garden, New York City. Chas. D. Cleveland, Sec'y, Eatontown, N. J.
 Jan. 11-11, Ogdensburg, N. Y. Chas. W. Loomis, Sec'y.
 Jan. 17-21, Corry, Pa. Guy M. Simmons, Sec'y.

Southern States

Oct. 20-24, Baton Rouge, La. Wm. H. Gates, S'y.
 Nov. 2-6, Chattanooga, Tenn. Fred C. Rose, S'y.
 Nov. 3-8, Shreveport, La. Louis N. Brueggerhoff, Sec'y.
 Nov. 8-12, Augusta, Ga. H. W. Cameron, Sec'y.
 Nov. 23-30, Louisville, Ky. A. W. Haller, Sec'y.
 Dec. 13-18, Lake Charles, La. B. F. Hendricks, Sec'y.
 Jan. 10-15, Charleston, W. Va. Julien C. Byrd, Sec'y.
 Jan. 11-11, Norfolk, Va. L. C. Page, Sec'y.

Central West States

Nov. 29-Dec. 4, Kansas City, Mo. Wm. Hunter, Sec'y.
 Dec. 1-5, Terre Haute, Ind. Harry Forbes, Sec'y.
 Dec. 7-10, Joplin, Mo. Fred Crosby, Sec'y.
 Dec. 7-11, Norwalk, Ohio. Chas. O. Jackson, S'y.
 Dec. 13-17, Mt. Carmel, Ill. L. S. Hochran, Sec'y.
 Dec. 20-25, Plainville, Ind. O. M. Heldt, Sec'y.
 Dec. 27-Jan. 1, Caldwell, Kans. L. A. Perry, S'y.
 Jan. 10-15, Kansas City, Mo. E. L. Noyes, Sec'y.
 Jan. 13-19, Chicago, Ill. D. E. Hale, Sec'y.
 Jan. 24-29, Eaton, Ohio. Ora Overholser, Sec'y.
 Jan. 24-30, Elkhart, Ind. W. E. Bruning, Sec'y.

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Are you bring out all the quality that your birds have? It is not only necessary for birds to be clean but they must be fitted and trimmed to the minute to win. By sending to me to wash and fit, the very best finishing touches will be put on. Twenty years experience in showing is yours with every bird sent me. Am open to a few more judging engagements.
 Arthur G. Dustin, Framingham, Mass.

The breeder who has made possible the World's best flock of White Wyandottes.

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I. W. BEAN

Announces a Special Summer Sale of His HARVARD RED BREEDERS AT HALF PRICE OR LESS

A real opportunity to get a trio, pen, or single birds of this noted line at less than the cost of ordinary. Pens broken up June 15th. Send for list.

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BOSTON SHOW, 1849

Was the FIRST POULTRY SHOW IN AMERICA. In order to make information about this show available to all interested in poultry, John H. Robinson has made a complete account of it from the fragmentary reports published at the time, and illustrated it with reproductions of emblems made at that time. Price 10 cents, postpaid.

FARM-POULTRY PEE. CO., 39 Sudbury St., BOSTON, MASS.



Breeding Ducks at Weber Bros., Wrentham, Mass.

WHERE DEMAND DOES NOT CREATE SUPPLY

THERE is a large demand—practically an unlimited demand—for pullets ready to lay in September, October, and November, at from \$12 to \$18 per dozen. There is no general supply at such prices, and I think it doubtful whether there ever will be. The only way that I can figure out a supply for this demand is through general farmers growing enough more chickens each year than they need themselves to have a surplus about equal to what they keep, to sell to this trade. To get this result, there must be special effort throughout a community. For a farmer here and there to grow twice as many pullets as he needs, with the expectation of selling them at, say, a dollar apiece at this season, will produce very little effect. In fact, the occasional farmer doing this may find that it costs him more to sell the extra pullets than the difference in the price he gets for them for this purpose and what he would get if he sold them for meat.

But the first condition that keeps the poultry keeper on a general farm out of such trade as this is the lateness of hatching on most farms. Pullets to be ready to lay early in the fall must be hatched from six to eight weeks earlier than chickens are usually hatched on general farms, and must have more attention than the average farmer's chickens get in March and April.

People who are specializing in poultry cannot afford to grow stock to sell at these prices; but many farmers could if they could hatch their chicks early and give them the necessary attention in early spring. Then through the rest of the season such a number of chickens as the farm will give good range can be grown without much expense. Most farms can grow more chickens than they are pre-

pared to house when cold weather comes. If a farmer can hatch early, sell off the cockerels early, and have fifty, one hundred or more pullets to sell at this season in addition to what he wants to keep, he should be able to make a good profit on the summer season's poultry work, and be in much better shape than farmers usually are to make the pullets pay through the winter.

If many farmers in a community would work on such a plan they could advertise and sell through one of their number or as an association. This is the kind of co-operation that is practical.

THE SCORE CARD.

THE old time discussion of the score card vs. comparison seems to have taken on a newness of life, judging from the amount of space being devoted in the poultry press. A fairly representative trial of comparison in Iowa leads the writer to believe that his old time ideas regarding comparison shows was mighty near correct. Every small show in Iowa that has tried comparison judging has found it an absolute failure, and that should seem to be a pretty fair test, and in referring to the small shows of Iowa we feel that we are voicing the sentiments of every state in the West. Comparison judging of late years has been given a fairly good test, and judging by the financial failures of the majority, and a total abandonment of many, has quickly brought about a change, and the old time score card method has been resuscitated to the entire satisfaction of the average show management. The comparison system may prove highly satisfactory for Madison Square, the Palace, Pittsburg, Philadelphia, Chicago, and such metropolitan shows, where the exhibitors are experts and not novices, but it's not working satisfactorily in the smaller shows. These smaller shows are the very



Young Ducks in Yards With "Water Range" on A. J. Hallock's Farm, Speonk, L. I.

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BOSTON WINNING Buff Wyandottes. Can I help you to winners or breeders? Sewell Ctr. Dr. N. W. Sanborn, 324 South Road, Holden, Mass.

ORPINGTONS.

S. C. BLACK Orpingtons. Silver cup winner S. St. Albans, Vt. Every bird from winner. Cockerels and pullets any number. Trios \$5.00 up. Landon Abernethy, Bakersfield, Vermont. 10

LEGHORNS.

YOUNG-FERRIS STRAINS Single Comb While Leghorn hens, cocks, and cockerels must be sold to make room for growing stock. Several hundred hens (this year's breeders and fine birds) \$1.00 each; \$80 per 100. Cocks and cockerels, \$1.00 to \$5.00 each. Willow Brook Egg Farm, West Berne, N. Y. 1 f

\$1 EACH—S. C. W. LEGHORNS, pullets and yearlings, cocks and cockerels. Will ship anywhere. Send for booklet. Woodworth Farm, Wilton, Conn. 1 f

PEDIGEEED PULLETS and Yearling Hens from 234 egg strain, heavy winter laying, highest quality, trapped, Rose Comb Brown Leghorns. Write for circular No. 9. Cedarcroft, Madison, Conn. 10

MINORCAS.

BLACK Minorca eggs, \$3 per sitting; cockerels. R. Story, 187 Arlington Av., Brooklyn, N. Y. 12-2

LIGHT BRAHMAS.

LIGHT BRAHMAS, large, vigorous, standard bred, excellent winter laying kind. My stock is best obtainable. Eggs, \$2 a sitting; \$6 per 100; 75% fertility guar. L. L. Unagst, Hingham, Mass. 10

LANGSHANS.

FIRST COCK, hen, cockerel, pullet, pen; best display. Silver cup for best 10 single birds won by Robinson's Langshans at N. Y. State Fair, 79 entries in class. J. F. Robinson, Main Street, South Weymouth, Mass. 1 f

SUSSEX.

RED SUSSEX—Old and young stock for sale from best stock in this country; good clear color, \$2 and \$3 each. Joseph Mason, Newton Upper Falls, Mass. 11

TWO OR MORE VARIETIES.

SURPLUS Cockerels must go. W. Rock \$1.50; S. W. Leghorn \$1.00 each as long as they last. Eggmont Poultry Yard, Center Marshfield, Mass. 10

PRINTING.

ANYTHING from small tags to large catalogs. First class work. Reasonable prices. The Everett Print, 53 Cornhill, Boston, Mass.

POULTRY PRINTING—150 envelopes and 150 note heads, both \$1, postpaid. Cards, tags, labels, same price. Finest cuts used. Samples free. Wayside Press, Carlisle, Mass. 10

WANTED.

POULTRY manager, married, desires situation commercial plant preferred; 10 years practical experience; 4 years in last position; thoroughly reliable; finest references. Box 235, New Rochelle, N. Y.

WANTED—POSITION ON FARM or as assistant superintendent on general farm, by young American, age 22, absolutely temperate. Up-to-date farm desired where valuable experience can be gained. Willing to work. High school graduate. E. D., care Farm-Poultry, Boston, Mass. 10

His Classified Ad. Paid

Last year I used two other poultry papers (besides FARM-POULTRY) that claimed very large circulation, but nearly all my orders came from FARM-POULTRY. Joseph Mason, Newton Upper Falls, Mass.

life of ninety per cent of the Standard bred poultry trade, and every one that is absolutely killed by the comparison system of judging means a loss of business to some one, usually some fancier higher up, and one that may be used to exhibiting at the very largest of comparison shows, and that may be an advocate of comparison judging. The amateur fancier does not always expect to win, but he does like to know just how close he came to hitting the bull's eye—he wants a score card—and if the smaller shows are to continue and be thrifty in the future, show managements had better stick pretty close to the score card method of placing awards. Give the expert—the old timer—all the comparison he wants—it's good enough for him, but it's not passing muster with the smaller class of exhibitors. Comparison judging has had a fairly good trial in Iowa and, in fact, throughout the central west states, and has proven absolutely unsatisfactory and to the extent of making bankrupts of practically every small association that was caught in the whirl of comparison popularity. It's a far better policy to give the exhibitors what they want. If Madison Square wants comparison and Podunk score card, what's the use of trying to foist a method not desired by either.—*Western Poultry Journal*.

A "FRESH" EGG

British Board of Agriculture is Attempting to Define It

THE story teller, joker, actor, and comedian have handled the egg problem in more senses than one, but not in a manner that has helped to solve the main problem as to what is a new laid egg, or what constitutes a fresh egg. Perhaps the Board of Agriculture may have a success that settles the matter for the benefit of the trade and consumers alike. The board has the subject under serious consideration, and has issued a circular to the principal producers and dealers, in which inquiries are made as to the understood meaning of such definitions as "new laid" and "fresh" as applied to eggs. The principal question involved is the number of days from the date of laying up to which an egg may properly be described by these terms. Already the trade—and newspapers—are discussing what the answers should be. Some of the dairy companies declare it is almost impossible to know when an egg ceases to be new laid. In large poultry yards, and in fields where hens are allowed to wander, an egg is not always found immediately it is laid. Some sellers mark their eggs with the probable date of laying. There are, however, trade rivals who say that the first date is occasionally "over laid" if customers are not buying many.

At the Dairy Farmers' and Small Holders' Association it was stated that an egg is "new laid" up to three or four days after it has been found. After that, it is difficult to say how long it can be called "fresh." In the cool weather it remains a "fresh" egg about three weeks.

The "cooking" egg is seldom English, as there is a sufficient demand for English eggs to cause them to be sold before they have ceased to be fresh. The "cooking" egg is usually imported, and may be Irish, Russian, or Canadian. With regard to the point raised in the inquiry form, whether once an egg has been taken from an incubator and found not to be fertile, it can still be described as "new laid" or "fresh," the opinion was given that such an egg would be quite wholesome if, immediately it was found not to be fertile, it was removed from the incubator. It

could not be described as "new laid" or "fresh," but while it would not be safe to eat boiled it could be used as a "cooking" egg.

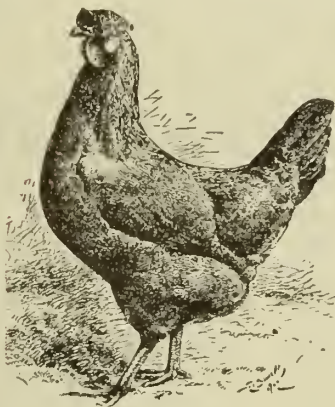
A more difficult problem may be the determination of the date of the egg's origin. In Denmark they have a happy way of applying a date stamp to each egg as it is brought in, but we doubt whether the great bulk of our own poultry rearers would willingly take the trouble to act as secretary to the hens.

"It is not easy to answer all the questions, because there is much difference of opinion on certain points," says a Manchester dealer, "but I think we are generally all agreed in the trade as to the 'new laid' variety. A new laid egg usually comes from the country district near a town, and it should keep its title from ten to twelve days after being laid. An average of fourteen days is commonly given as the life of a 'fresh' egg. In normal times, Irish, Danish, and Russian eggs on the Manchester market are regarded as 'fresh' eggs when they come properly packed and in sweet straw. For fourteen days they are labeled as 'fresh.'"

—*London Dairy*.

What Do You Know About Oil?

A new customer of the Jenney Manufacturing Co. said the other day: "I have used kerosene oil all my life and always supposed that kerosene oil was kerosene oil until I began to use Commonwealth Safety Oil. Then I quickly found out that all kerosene oil is not the same. I learned among other things that the best oil burns without odor. We are using it not only in incubators and brooders, but in the house, and everywhere it gives perfect satisfaction."



Breed Books

The Leghorns. Edited by J. H. Drevenstedt.

Illustrated with color plates by Sewell; 140 pages; 9 x 12; paper covers. Price postpaid, \$1.00.

The Plymouth Rocks. Edited by W. C. Denny and J. H. Drevenstedt.

Three color plates by Sewell; 144 pages; 9 x 12; profusely illustrated; paper covers. Price, postpaid, \$1.00.

The Rhode Island Reds. Edited by D. E. Hale.

Color plate of feathers by Sewell; 88 pages; 9 x 12; illustrated; paper covers. Postpaid, 75 cents.

The Wyandottes. Edited by J. H. Drevenstedt.

Three color plates by Sewell; 160 pages; 9 x 12; illustrated; paper covers. Price postpaid, \$1.00.

The Orpingtons. Edited by J. H. Drevenstedt.

80 pages; 9 x 12; illustrated; paper covers. Price postpaid, 75 cents.

The Asiatics.

Color plates of Buff and Partridge Cochins by Sewell; 96 pages; illustrated; paper cover. Price postpaid, 50 cents.

FARM-POULTRY PUB. CO.,
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"My Hens are Laying Fine — are Yours?"

Right Now

should be egg time and money-making time with your hens. Others have found out how to get eggs, without extra expense or care. Just give your flock

Pratts Poultry Regulator

It makes Hens lay. An extra egg or two per bird will pay for enough Regulator the whole winter through, and experience shows that you actually get eggs by the dozens. It starts pullets laying, hurries up the molting period and gets hens back on the job.

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The sudden changes in fall, dampness, draughts and other causes produce roup and colds. Sure protection is the guaranteed Pratts Roup Remedy, tablets or powder, 50c and 25c.

For thorough disinfecting, use Pratts Poultry Disinfectant, \$1.00 a gallon, 35c a quart.

Guaranteed or money back. Always refuse substitutes.

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POULTRY BOOKS

By JOHN H. ROBINSON

"Unquestionably Mr. Robinson has written the best books produced in America to date on practical poultry subjects."—*Reliable Poultry Journal*.

Poultry - Craft

Mr. Robinson's first book was begun in the summer of 1897 and was published in November, 1899. Its aim was to meet the demand for a book that would give one interested in the subject an intelligent understanding of its possibilities and a comprehensive idea of methods of production, and which would give the beginner detailed information as to "What to do, and how to do it." Written while the educational poultry movement was in the incipient stage, this book—as the title page announced—was designed to be a text-book for poultry keepers rather than for students in classes. The arrangement and treatment of the subject were adapted to the individual teaching himself with home practice. The book was, however, extensively used as a class text-book, and is still so used by many instructors who prefer a more elementary book than the author's "Principles and Practice of Poultry Culture."

"POULTRY-CRAFT" is emphatically a POULTRYMAN'S BOOK FOR POULTRY KEEPERS. Before beginning it the author had had seven years experience in commercial poultry keeping, and he did not take up poultry journalism as a profession until after he had completed this book. It is the product of a working poultryman who was a student of every phase of his work. For those who want to learn with the least effort what they need only for their own practice it is still the most satisfactory book. 272 pages; 94 illustrations. Price \$1.50.

Principles and Practice of Poultry Culture

This book was written primarily as a text-book for agricultural colleges, but with the idea of making it appropriate also for general readers requiring a thorough treatise on the subject. Mr. Robinson undertook the work of writing it most reluctantly after he had for several years urged various instructors to prepare a text-book on lines better adapted to their work than his "Poultry-Craft." As none of the instructors acted upon the suggestion, and the use of "Poultry-Craft" by students was increasing, he made arrangements with Ginn and Company to publish such a book as he would wish to have taken as his contribution to higher education in this subject.

"PRINCIPLES AND PRACTICE OF POULTRY CULTURE" was commenced in 1901 and published January, 1912. The author spared no pains to make it as concise and complete as possible, and to secure the most careful accuracy in every statement. After the book appeared, one reviewer said of it: "Although it extends to 611 pages there is scarcely an unnecessary paragraph." Had this reviewer been familiar with book-making he would no doubt have detected that the few paragraphs unnecessary to the treatment were necessary to the books of a page broken by illustrations, or of a page at the end of a chapter. The educators received it with such words as these: "Incomparably better than any previous poultry book for the student." "Exactly the sort of book we have all been looking for." "The first book on poultry that I have ever seen that seems to me a satisfactory text." "The best thing yet, being authentic and up to date from a practical as well as from a scientific standpoint," etc., etc. The book is elaborately illustrated, having 550 half-tones and drawings, comprising the most interesting and instructive series of illustrations of poultry ever brought together. Price \$2.50.

Our Domestic Birds

presents the first complete statement of the rudiments of aviculture for boys and girls. It teaches the things that everyone ought to know about poultry, pigeons, and cage birds. Particular attention is given to the varieties of birds and to methods of management best suited to young beginners. It is a book that is read with interest by all young people whether engaged in keeping poultry or simply reading for information. 327 pages; 236 illustrations. Price, \$1.35.

Common-Sense Poultry Doctor

The best treatise on poultry diseases for the ordinary poultry keeper who has to diagnose diseases in his flock for himself, and apply simple remedies. In his early commercial poultry keeping days the author gave a great deal of attention to treating sick poultry, and had marked success with many severe cases. Like most practical men, however, he soon discontinued "doctoring," except for cases where a few simple treatments are effective. Some years later when he became editor of FARM-POULTRY he had to give a good deal of attention to this subject in order to advise subscribers having sick birds. "The Common-Sense Poultry Doctor" treats the subject along the lines which his experience showed him are most helpful to poultry keepers. While most emphasis is placed upon the simple remedies most easily applied, those required for treatment of serious cases are also given. 176 pages. Price 50 cents.

Broilers and Roasters

A hand-book especially for those producing table poultry for the eastern city markets. It treats its special subjects more elaborately than they can be treated in a general work on poultry culture. 96 pages; 20 illustrations. Price 25 cents.

Winter Eggs

A monograph on the subject of most interest to the greatest number of poultry keepers. Those who want to concentrate their efforts on winter egg production will find this little book in which all points bearing on the subject are brought together without reference to their other relations, very serviceable. 18 pages. Price 15 cents.

The above books constitute Mr. Robinson's contribution to date to permanent poultry literature. "First Lessons in Poultry Keeping" is not included in the list because it is not a "book" in the true sense, but a collection of articles of varying quality. Only a limited number of copies of the first series are on hand, and it will not be republished.

No Poultry Keeper Can Afford to Be Without the Books by John H. Robinson That Suit His Need.

HAVE YOU GOT YOURS?

We Will Send You Any in the Above List, Postage Prepaid, at the Price Stated.

FARM-POULTRY PUBLISHING CO., 39 Sudbury St., BOSTON, MASS.

BREED AND VARIETY CHARACTERS

W. C. DENNY, associate editor of the *Poultry World*, and I seem to disagree about the multiplication of varieties. Referring to efforts to popularize a Rose Comb Barred Plymouth Rock he says:

"We presume that after Rose Comb Barred Rocks there would come R. C. White Rocks, R. C. Buff Rocks, R. C. Columbian Rocks, and so on until we will have a Rose and Single Comb of each variety of the Plymouth Rock family.

"May this time never come! The Single Comb is one of the distinguishing features of the Plymouth Rock as the Rose Comb is of the Wyandotte and the Pea Comb of the Brahma.

"Just how it is possible to produce a Rose Comb Barred Plymouth Rock with 'no outside' blood other than the best strains of Barred Plymouth Rocks is beyond us. We have seen thousands of Barred Plymouth Rocks in every section of the country, and do not recall ever seeing or hearing of a Rose Comb being produced by any breeders of a reliable strain. It would not be surprising to have a Rose Comb variety produce Single Combs, but it cannot be said that line bred Single Combs will produce Rose Combs.

"The multiplying of standard varieties has gone quite far enough. Let us stop increasing the number by simply putting on another dress in the form of either comb or plumage and require future breeds and varieties to have sufficient distinguishing characteristics so that it does not require an expert to recognize them."

If stock of a breed or variety can reproduce true to type, and has characteristics of a breed or variety, it makes no difference whether it has the blood of other stock with which it is identical in appearance, or has been originated without the use of any such blood. The Barred Plymouth Rock and nearly every other recently developed breed and variety is of very mixed origin, and the general uniformity now seen in the best stocks of our breeds is the result of the general mixture of many strains of diverse composition. While it is true that such mingling of strains often gives a large proportion of unsatisfactory progeny, it is just as true that high average uniformity in a breed or variety is not secured until after quite a thorough mingling of the leading early strains.

While it is true as Mr. Denny says, or as far as I can learn is true, that single combs that have that character fixed do not produce rose combs, and that therefore rose comb varieties would not come direct from single combed, it does not necessarily follow that a rose combed copy of any single combed variety ought not to be accepted as a worthy variety. On the contrary, as the American Poultry Association has again and again "recognized" such rose combed varieties, made by mixture of foreign rose combed stock with the single comb variety, no valid reason can be given for not accepting as many varieties of comb for any color variety of any breed—provided it has the other breed and variety characters. Action of that kind is either purely arbitrary and unreasonable, or, in certain cases, may be justified on the ground of the difficulty of clearly differentiating the new variety from some other. But even in the latter case, the A. P. A.'s attitude on something else will almost always afford a contrary precedent.

Take the case of the White Rock and White Wyandotte. The only absolute

distinction between them is the comb, for under the methods of judging used, either one can have the shape and size of the other and still stand well in an exhibition. The pea comb of the Light Brahma was not the exclusive form of comb in the early days. Many birds were single combed.

What good reason is there for not making color sub-varieties of breeds? Years ago there were three shades of buff and Red in Cochins, each recognized as a good variety. What limitation of human interest and intelligence demands that if a certain shade of buff in a fowl is made a standard color, no other shade of buff shall be tolerated in exhibitions? It is not even necessary that birds should be of the same shade to compete together on even terms. Anyone who has any perception of quality in color can say which (if either) of two birds is the better color, even if they are quite different in shade. Frequently breeders show birds of different shades of color when in doubt as to which a judge will favor.

It is reasonable to require that there shall not be very great differences in color or in any other character in birds competing in the same class, and that if sub-varieties are made according to color, or any other point, the recognized standard colors for each shall be quite distinct, but there is no serious obstacle to that.

Finally it seems utterly absurd to object to the increase of good varieties when we have a number of varieties in which male and female, as exhibited, are of distinct sub-varieties, the female of one and the male of the other not being "standard." This is not an argument against double mating; but an argument for recognition of any and every good variety.

EDITOR PURVIS AS A MOWER

IN A STORY of his day's work on his farm in Idaho, Miller Purvis, editor of *Poultry Life*, says in that paper—

"The cows are kept corraled and fed green clover, so the clover must be mowed each day. The editor and a scythe imported from Germany make up the mowing machine. If he had to use an American scythe, he would sell the cows, but the wide bladed, sharp pointed German scythe, with a snath that allows mowing while standing up, makes mowing easy and takes but little time each day."

If Mr. Purvis cannot stand up and mow with an American scythe he should get someone who knows how to adjust it for him. I'd like to have a little mowing match with him, he to use his imported German scythe and I an American scythe, and I'll take him on any time we can get together where there is anything mowable.

To Keep the Ancient History of Comparison Judging Straight

J. H. Drevenstedt, quoting in the *American Fancier* from the article on "The Ancient History of Comparison Judging," in September *Farm-Poultry*, states that I was in error in saying that the 1891 show at Madison Square Garden was a score card show. Referring again to the files of *Farm-Poultry* for that period, which I consulted to learn what method of judging was used, that not being shown by the catalogue, I find that Mr. Drevenstedt is correct on that point and that my mistake arose through turning to the report of the 1890 show which is in the same volume and same index. I readily admit the error and thank Mr. Drevenstedt for pointing it out.

At the same time it is proper to say that my error on this point does not alter the fact that Mr. Drevenstedt was in error in saying that the 1891 show at the Garden was the largest that had ever been seen in America up to that time.

IS YOUR HEN HOUSE A PLEASANT HOME FOR HENS?

It cannot be if it is infested with lice and mites. No matter how good the house may be otherwise, these pests must be kept down, or the hens will be uncomfortable, become debilitated, and cannot be profitable. The best way to insure their comfort and your profit in the coming winter is: AFTER YOU HAVE CLEANED THE HOUSE THOROUGHLY AS YOU ALWAYS DO AT THIS SEASON, OR EARLIER, MAKE A LIBERAL APPLICATION TO ALL INTERIOR WOODWORK OF

JENNEY'S SPRAYING OIL

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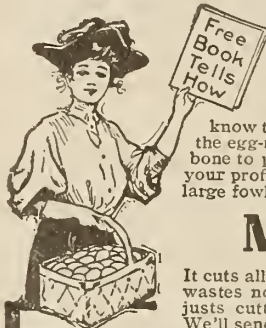
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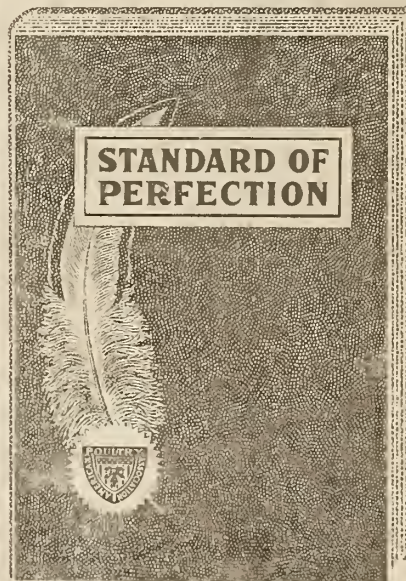
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